PROFILE OF INJURY IN SAN FRANCISCO

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SAN FRANCISCO INJURY CENTER
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To the people of San Francisco:

Good public health programs start with good data. When a problem is defined, it becomes apparent that there are populations, places and situations at particular risk. Knowing this, policymakers are better able to decide where and how to use scarce resources to reduce risk and prevent injuries.

This *Profile of Injury in San Francisco* defines our city's injury problem. Specific causes of injury are highlighted because effective prevention strategies tend to be organized by cause of injury. For example, a strategy to prevent youth firearm homicide is inherently different from a strategy to prevent falls among the elderly. The four major causes of injury death for San Francisco residents are poisons/drugs, firearms, motor vehicles, and falls.

Injury severity has at least three categories for which we have data: death, injury requiring hospitalization, and injury treated and released from an emergency department. The causes of injury are quite distinct for these three levels of injury severity, because some causes of injury (for instance, guns) are more lethal than others (for instance, a flying shard of glass).

When all these data are analyzed, the resulting profile highlights the injury problem in a densely populated urban area. Comparisons of San Francisco data are made with profiles of California and the United States. Maps of the city indicate where the high risk zones for certain injuries are, and therefore what areas should be given special attention for prevention efforts.

This *Profile* defines the problem of injury in San Francisco. Appendix D lists San Francisco institutions and programs working to prevent injuries. Now we must create and implement a strategic plan for injury control in our city. We welcome the collaboration of residents from the Bay to the breakers, including elected officials, the medical and public health community, police, educators and community organizers. San Francisco has nationally recognized resources for injury control. It is time that good data, scientific and programmatic expertise, political will and funding come together so that subsequent *Profiles* portray a safer and healthier San Francisco.

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Profile of Injury in San Francisco

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March, 1994

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Table of Contents

EXECUTIVE SUMMARY i

INTRODUCTION 1
Background
Sources of Data
Definition of Terms

OVERVIEW OF INJURY 5
Leading Causes of Injury Deaths and Hospitalizations
Recorded Intent of Injury Deaths and Hospitalizations
Counts and Rates of Injury Deaths and Hospitalizations
Reported Charges of Injury Hospitalizations
Comparison of Injury Rates in San Francisco with California and the U.S.

PROFILES OF INJURY
By Cause

Poisoning and Drug Overdose 19
Firearm 35
Motor Vehicles 45
Falls 55

By Intent

Homicide 63
Suicide 73

Demographic Patterns

Age Patterns 79
Geographic Patterns 83

REFERENCES 89

APPENDIX A:

Methodology and Calculation of Rates 90

APPENDIX B:

E code groupings by Injury 93

APPENDIX C:

Counts and Rates of Injury Deaths and Hospitalizations 97

APPENDIX D:

Injury Prevention Programs 112

List of Tables and Figures

Figure 1: Leading Causes of Injury Death, San Francisco, 1986-1991 6

Figure 2: Leading Causes of Injury Hospitalizations, San Francisco, July 1990-June 1991 7

Figure 3: "Intent" Classification of Injury Deaths, San Francisco, 1986-1991 8

Figure 4: "Intent" Classification of Injury Hospitalizations, San Francisco, July 1990-June 1991 9

Figure 5: Injury Deaths by Age and Gender, San Francisco, 1991 10

Figure 6: Age-Specific Rates of Injury Deaths by Gender, San Francisco, 1991 10

Figure 7: Injury Hospitalizations by Age and Gender, San Francisco, July 1990-June 1991 11

Figure 8: Age-Specific Rates of Injury Hospitalization by Gender, San Francisco, July 1990-June 1991 11

Figure 9: Reported Charges of Injury Hospitalizations, San Francisco, July 1990-June 1991 13

Figure 10: Injury Death Rates in San Francisco, California, and the U.S. 14

Figure 11: "Intent" Classification of Injury Death Rates in San Francisco, California, and the U.S. 15

Figure 12: Injury Hospitalization Rates in San Francisco and the U.S. 16

Figure 13: "Intent" Classification of Injury Hospitalizations in San Francisco and the U.S. 17

Figure 14: Fatal Poisoning/Drug Overdose by Age and Gender, San Francisco, 1986-1991 21

Figure 15: Agents Causing Poisoning Death, San Francisco, 1986-1991 22

Figure 16: Death Rates from Poisoning/Drug Overdose by Type of Drug and Year, San Francisco 23

Figure 17: Hospitalizations for Poisoning/Drug Overdose by Age and Gender, San Francisco, July 1990-June 1991 25

Figure 18: Rates of Hospitalizations and Deaths due to Poisoning/Drug Overdose by Race, San Francisco 27

Figure 19: Calls to the Poison Control Center due to an Exposure by Age, San Francisco, 1992 30

Figure 20: Reason for Exposure by Age, San Francisco Poison Control Center, 1992 30

Figure 21: Management Site of Poisonings Reported to the Poison Control Center, San Francisco, 1992 31

Figure 22: Count of Poisoning/Drug Overdose Deaths by Zip Code of Residence, San Francisco, 1991 33

Figure 23: Calls to the Poison Control Center by Zip Code of Residence, San Francisco, 1992. 33

Figure 24: Age-Specific Rates of Firearm Deaths by Age and Race, San Francisco, 1986-1991 36

Figure 25: Percent of Firearm Deaths by Age and Intent, San Francisco, 1986-1991 37

Figure 26: Number of Firearm Deaths by Year, San Francisco 37

Figure 27: Age-Specific Rates of Firearm Injury Hospitalizations by Race, San Francisco, July 1990 - June 1991 38

Figure 28: Intent of Firearm Injuries that Resulted in Hospitalization, San Francisco, July 1990 - June 1991 39

Figure 29: Intent of Firearm Injuries that Resulted in Death, San Francisco, 1986-1991 39

Figure 30: Emergency Department Visits for Firearm Injury by Race and Gender, San Francisco General Hospital, 1992 40

Figure 31: How People with Firearm Injuries were brought to San Francisco General Hospital Emergency Department, February - December 1992 41

Figure 32: Count of Firearm Deaths by Zip Code of Residence, San Francisco, 1991 43

Figure 33: 9-1-1 Responses for Firearm Injury, San Francisco, 1991 43

Figure 34: Motor Vehicle Hospitalizations and Deaths by Age, San Francisco 46

Figure 35: Deaths and Hospitalizations due to Motor Vehicle Crashes, San Francisco 47

Figure 36: Death Rates from Motor Vehicle Crashes by Age and Type of Fatality, San Francisco, 1986-1991 48

Figure 37: Hospitalizations Rates from Motor Vehicle Crashes by Age and Identity of Victim, San Francisco, June 1990 - July 1991 48

Figure 38: Motor Vehicle Injuries by Severity and Race, San Francisco 49

Figure 39: 9-1-1 Responses for Pedestrian-Auto Injuries, San Francisco, 1991 52

Figure 40: 9-1-1 Responses for Bicycle Injuries, San Francisco, 1991 53

Figure 41: Causes of Injury Deaths Among Those 65 Years and Older, San Francisco, 1986-1991 56

Figure 42: Causes of Injury Hospitalizations Among Those 65 Years and Older, San Francisco, July 1990 - June 1991 56

Figure 43: Mortality Due to Falls by Age and Gender, San Francisco, 1986-1991 57

Figure 44: Hospitalizations for Falls by Age and Gender, San Francisco, June 1990 - July 1991 58

Figure 45: Age-Specific Hospitalizations Rates for Falls Among Residents 65 Years and Older, San Francisco, July 1990 - June 1991 58

Figure 46: San Francisco General Hospital Emergency Department Visits for Falls and San Francisco Population, By Age, 1992 60

Figure 47: Count of Deaths Due to Falls by Zip Code of Residence, San Francisco, 1991 61

Figure 48: Geographic Distribution of Elderly Population by Census Tract of Residence, San Francisco, 1990 61

Figure 49: Age-Specific Homicide Rates by Race, San Francisco, 1986-1991 64

Figure 50: Age-Specific Assault Hospitalization Rates by Race, San Francisco, 1990-1991 65

Figure 51: Rate of Assault Hospitalizations and Homicides per year by Gender, San Francisco 65

Figure 52.: Victims of Homicide, San Francisco, 1991-1992 66

Figure 53: Primary Motive in Solved Homicides, San Francisco, 1991-1992 66

Figure 54: Homicides by Year and Type of Death. San Francisco, 1986-1991 68

Figure 55: Aggravated Assaults by Year and Type of Weapon, San Francisco 68

Figure 56: Homicides by Age and Type of Death, San Francisco, 1986-1991 69

Figure 57: Homicides by Zip Code of Residence, San Francisco, 1991 70

Figure 58: Rate of Homicides by Zip Code of Residence, San Francisco, 1991 70

Figure 59: Visits to San Francisco General Hospital Emergency Department for Gun Shot Wound, by Zip Code of Residence, and 9-1-1 Responses for Penetrating Trauma, 1992 71

Figure 60: Age-Specific Suicide Rates by Race, San Francisco, 1986-1991 74

Figure 61: Suicides by Age and Type of Death, San Francisco, 1986-1991 75

Figure 62: Count of Suicides by Zip Code of Residence, San Francisco, 1991 77

Figure 63: Rate of Suicides by Zip Code of Residence, San Francisco, 1991 77

Figure 64: Percent of Population Below the Poverty Line, by Census Tract, San Francisco, 1990 84

Figure 65: Rate of 9-1-1 Responses for Penetrating Trauma by Census Tract, San Francisco, 1991 85

Figure 66: Rate of 9-1-1 Responses for Unintentional Falls by Census Tract, San Francisco, 1991 86

Figure 67: Percent Below Poverty Level, by Aggregated Census Tract San Francisco, 1990 87

Figure 68: Rate of Injury Death by Zip Code of Residence, San Francisco, 1991 87

Table 1: Poisoning and Drug Overdose Hospitalizations, San Francisco, June 1990 - July 1991 26

Table 2: Gender Differences in Firearm Injuries, San Francisco 42

Executive Summary

Overview

From 1986 through 1991, the average yearly death toll of San Franciscans from injuries was 573, or more than 11 per week. In the 12-month period, July 1990 through June 1991, the hospitalization count for San Franciscans from injuries was 5608, or about 108 per week.

The leading causes of injury death included poisoning/drug overdoses, about 13/month (rate 22/100,000 population/year), firearms and falls, each over 7/month (rate 13), and motor vehicles, about 6-7/month (rate 11). Comparisons with California and the U.S. highlight the fact that the San Francisco experience is that of a dense urban environment. Poisoning/drug overdose death rates are about 4-fold higher than in California or the U.S. Conversely, the motor vehicle death rate is 50-75% lower in San Francisco.

The leading causes of injury hospitalizations included falls, about 220/month (rate 360), motor vehicles, about 33/month (rate 50), poisoning/drug overdoses, over 23/month (rate 40), and firearms, about 19/month (rate 30). A comparison of the leading causes of injury deaths with injury hospitalizations highlights the lethality of poisoning/drug overdoses and firearms.

Given the limitations of assignment of intentionality, the majority of injury deaths were unintentional (55%), then suicidal (25%), and homicidal (16%). In contrast, injury hospitalizations were overwhelmingly unintentional (87%), then assaultive (8%), and self-inflicted (4%).

The largest number of injury deaths was in males aged 25-44 years. The risk of injury death was nearly 3-fold greater in males than in females, and highest in the very old. The largest number of injury hospitalizations was in elderly females, followed by males aged 25-34. The overall risk of injury hospitalization was 1.5-fold greater in males than females, but the risk was greater in females for those aged 65 and older.

The injury death rate was highest in African-Americans (about 138/100,000 population/year), followed by Whites (95), and Latinos (57), and lowest in Asian/others (38). The hospitalization rate was similarly highest in African-Americans (about 1442), then Whites (905), Latinos (696), and Asian/others (294).

Poisoning/Drug overdoses

For the years 1986 through 1991 poisoning/drug overdose was consistently the leading cause of injury death among San Francisco residents. Males accounted for 76% of the 930 deaths and 68% of them were between the ages of 25 and 44 years. Within this group, 94% of the deaths were due to drugs or medications, usually unintentional (76%)

or suicidal (17%) (drug overdose deaths are generally classified as unintentional because the outcome (death) was not intentional even though the exposure was deliberate). The most commonly recorded poisoning agents were heroin (23%), cocaine (13%), and tranquilizers (7%).

Similar to deaths, males aged 25-44 accounted for the single largest number of hospitalizations due to poisoning/drug overdoses. Such hospitalizations for females peaked in the 15-24 year age group, with more females than males hospitalized. The most common agents associated with hospitalization were tranquilizers (30%), and the analgesic group (14%). Hospitalizations tended to be due to self-inflicted injuries rather than unintentional, by a ratio of 3 to 2. The charges in one year for hospitalizations due to poisonings/drug overdoses were over $1.8 million (excluding Kaiser hospitals).

Both the deaths and hospitalizations due to poisoning/drug overdoses were highest in African-Americans, lowest in Asian/others. Residence zip codes of those who died of poisoning/drug overdose were concentrated in the downtown area, along Van Ness Ave. and Mission Street.

Of San Francisco General Hospital's 5,923 Emergency Department visits for poisoning/drug overdoses during 1992, 35% included some form of alcohol use. Calls to the San Francisco Bay Area Regional Poison Control Center originating from San Francisco in 1992 numbered 7,603.

Firearms

Young (aged 15-24 years) African-American adults showed the highest risk of firearm deaths for the years studied, approximately 9-times higher than for similarly aged Whites. For those younger than 34 years, homicide predominated (70% or more) in firearm deaths, but suicide predominated for older age-groups. Males accounted for 86% of firearm deaths.

Young (aged 15-24 years) African-American adults experienced the highest rate of hospitalizations for firearm injuries, 21-times the rate for Whites. Firearm hospitalizations were 83% assaultive, 10% unintentional. Males accounted for 91% of firearm injury hospitalizations. The charges in one year for hospitalizations due to firearm injuries were over $2.4 million (excluding Kaiser hospitals).

San Francisco General Hospital's Emergency Department tended to 493 visits for firearm injuries in 1992, more than 41/month. In 1991, the greater numbers of firearm deaths and of 9-1-1 responses for firearm trauma were in the southeastern areas of the city.

Motor Vehicles

The greatest numbers of deaths and hospitalizations due to motor vehicles were in those aged 15-34 years, and males accounted for about two-thirds. Occupants, pedestrians, and motorcyclists each accounted for 70%, 25%, and 3%, respectively, of motor vehicle injury deaths. The same distribution for motor vehicle injury hospitalizations was 38%, 32%, and 27%. Motor vehicle occupant death rates were highest (about 15/100,000 population/year) for young adults (15-24 years); occupant and pedestrian death rates increased with age among the elderly (over 64 years). The charges in one year for hospitalizations due to motor vehicle injuries were over $4 million (excluding Kaiser hospitals).

In 1991, there were 813 calls for 9-1-1 responses for pedestrian injuries and these were concentrated in the downtown area (especially between 5th and 7th streets).

Falls

Injuries from falls are mostly a problem of the elderly: among those 65 years and older, falls accounted for 34% of injury deaths and for 85% of injury hospitalizations. Males outnumbered females in fall injury deaths for nearly all age groups, but females outnumbered males (1.4:1) in elderly (over 64 years) fall injury hospitalizations. The rate of hospitalizations for injuries due to falls was as high as 4.6% per year for those aged 85 years or older. The charges in one year for hospitalizations due to falls were over $34.2 million (excluding Kaiser hospitals).

Homicide

African-Americans suffered the highest homicide rate, particularly those aged 20-24 where the rate was about 10-fold higher than for Whites, and the large majority were male. On average, for each homicide, there were about 12 hospitalizations for assaults during 1990-91, and the age, sex, and race patterns were similar as for deaths. Homicides were most frequently committed with firearms, assault hospitalizations were most frequently due to stabbings. The male to female ratio was 4:1 for homicides and 6:1 for assault hospitalizations.

In 1991, the highest rates of homicide were in the Western Addition, South of Market, and southeast areas of the city. In 1992, there were 797 9-1-1 responses for penetrating trauma incidents and these were concentrated in the Tenderloin and South of Market areas.

Suicide

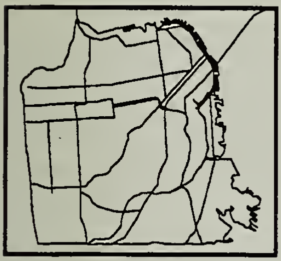
Suicides outnumber homicides by 1.5:1 in San Francisco. Whites show a risk 3-fold higher than African-Americans, the next highest group. The rates increased with age in Whites and Asian/others. The most likely methods were poisoning and firearms, 28% each, followed by suffocation and falls. For every 2 suicides, there were about 3 hospitalizations for self-inflicted injuries. The majority of these hospitalizations were for poisonings (71%). Males committing suicide outnumbered females 3 to 1. Males used firearms more frequently, females preferred poisoning. In 1991, the suicide rates were highest in the Civic Center/Tenderloin, South of Market, and northeast parts of the city.

Conclusion

Injury is a very important public health problem in San Francisco. Comprehensive strategies to prevent death and disease from injuries must come from collaborative efforts of the public health, medical, and mental health communities, along with the law enforcement, social service, and public safety agencies, as well as city government, community groups, and the general citizenry.

Background

City of San Francisco



The population of San Francisco hovered around 730,000 for the years 1986 through 1991 with a low of 723,959 in 1990 to an estimated high of 744,503 in 1992. The daytime population far exceeds these numbers, however, due to commuters and tourists. This report considers only those injuries sustained by San Francisco residents. San Francisco residency was determined by residence zip codes recorded on respective health records and death certificates. Approximately 21% of patients hospitalized in San Francisco for injuries during the year July 1990 through June 1991 were non-residents. These hospitalizations did not differ greatly from the hospitalizations of residents. Conversely, approximately 4% of all injury hospitalizations of San Francisco residents from July 1990 through June 1991 were outside city bounds.

The Range of Injury

The term "injury" represents a broad range of health outcomes. An injury can be defined as damage to bodily tissue caused by excessive energy transfer. The energy can be kinetic (as in blunt trauma caused by car crashes, falls or gun shots), thermal (burns), electrical, or chemical (poisonings). Drowning and suffocation result when tissue is deprived of oxygen.

Injuries can be categorized in many ways. Two common groupings are by cause and intent. Cause groupings distinguish among, for example, injuries due to a fall, firearm, poisoning, or drowning. Intent categories address whether the injury was self-inflicted (the most severe outcome being suicide), other-inflicted (the most severe outcome being homicide), or unintentional.

The range of injury can also be considered in terms of severity. The most severe outcome of an injury is, of course, death. Injuries which require hospitalization could be considered the next most severe group; emergency room and outpatient medical care follow. The severity spectrum of injury is often represented as a pyramid with the few cases of severe injury at the top descending down to the more numerous, less severe cases represented in the base. Such a picture conveys the "tip of the iceberg" phenomenon that for every injury death, there are many non-fatal injuries. Nationally, for every injury death there are 16 injury hospitalizations, and 380 injuries for which some form of medical care is sought (10).

Sources of Data

This *Profile of Injury* draws on many different sources of data. Information about injury deaths is gleaned from death certificate data for the years 1986 through 1991 for San Francisco residents. Injury hospitalizations are summarized using hospital discharge data which are collected by the State of California; hospitalizations of San Francisco residents who were discharged during the year July 1990 through June 1991 are considered here. 9-1-1 Paramedic response data were used primarily for mapping the geography of injury in San Francisco; records concerning residents for the year 1991 are considered here. The database at the San Francisco General Hospital Emergency Department was queried for injury events (of both residents and non-residents) to supplement hospitalization, death, and Paramedic data.

Each of these data sets is E coded; that is, records are assigned a particular code to identify the external cause of injury. With E codes it is possible to distinguish, for example, injuries that were due to motor vehicle collisions, from those that were caused by falls. E codes were first required to be used on hospitalization records in California on July 1, 1990. Hence the hospitalization records analyzed here represent the first full year for which E coded hospitalization records are available. More information about each source of data and about E codes is included in Appendices A and B.

In addition to the above sources, injury data for this report were obtained from the San Francisco Poison Control Center and the Drug Abuse Warning Network for poisoning information, and the U.S. Department of Justice and the Family Violence Prevention Fund for homicide and weapon use information.

Definitions of Terms

Mortality Rate: Number of deaths during a specified period of time (usually one year) divided by the population at the midpoint of that time period.

Hospitalization Rate: Number of hospitalizations during a specified time (one year) divided by the population at the midpoint of that time period. For this report, hospital discharge data were used; hence the hospitalizations included for the year were patient discharges during that year. Number of discharges can be distinguished from number of individuals discharged; it is possible that one individual may account for more than one hospital discharge if s/he had more than one injury which resulted in independent hospitalization. (Multiple hospitalizations for the same injury were excluded from analysis.)

Intentionality: Injuries have traditionally been classified by intent as well as by cause; an injury could be considered unintentional, purposefully inflicted by another (assault or homicide), or purposefully inflicted by oneself (suicide or attempted suicide). Traditionally, too, the responsibility for injury prevention has been distributed among different agencies according to intent. Homicides and assaults were the responsibility of law enforcement and criminal justice agencies. Suicides and attempted suicides were the responsibility of mental health agencies. "Accidents" were the responsibility of safety organizations.

Problems with this fragmentation are at least two-fold: 1) it obscures the role of specific causes of injury which contribute to all three intent categories, for example, firearms and poisoning/drug overdose; and 2) it assumes that we can truly know "intent". This is unrealistic because those involved in injury-causing events may not be alive and/or present to answer questions.

"Total Charges": "Total charges" as reported for hospitalizations include fees for "daily hospital services, ancillary services, and any other services defined as patient care", as required to be reported by the hospital. These charges do not include professional fees, including physician fees. Charges represent bills that were generated, not revenues collected. Kaiser Hospitals do not generate claims and therefore do not report charges.

Race/Ethnicity

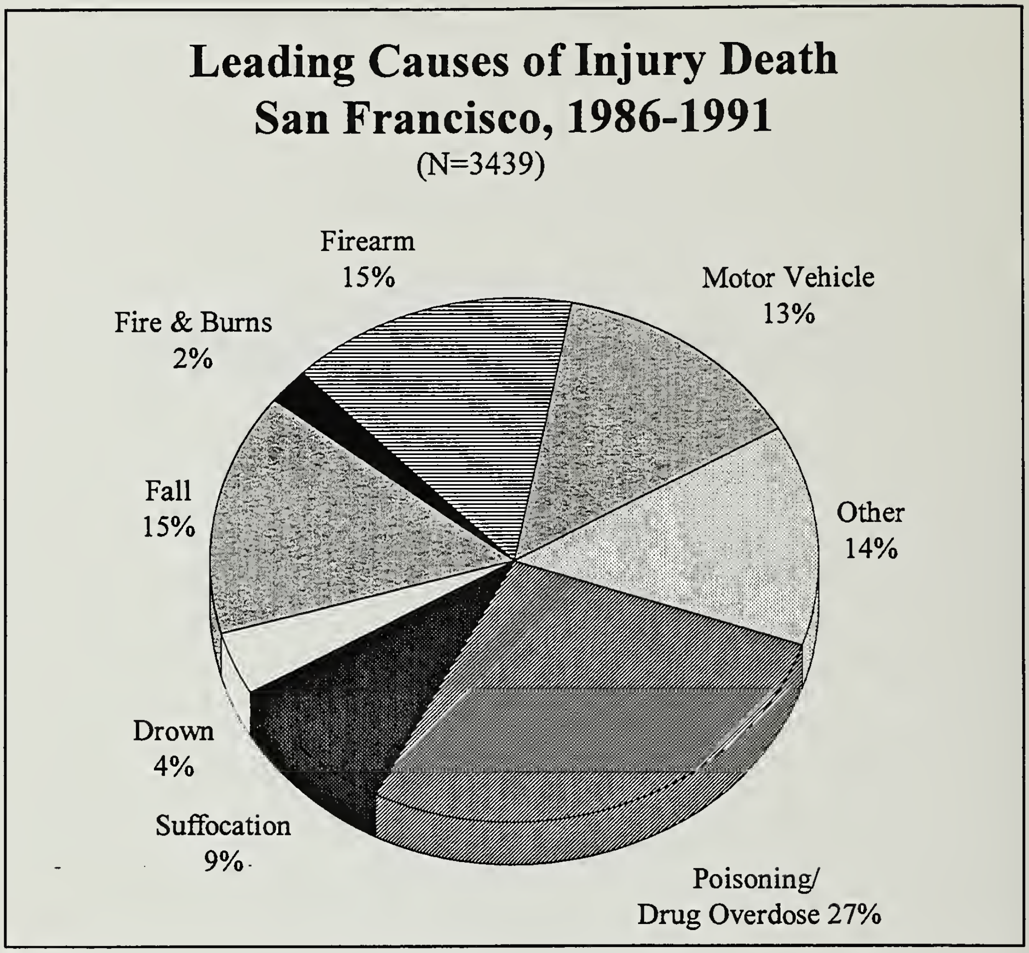
Misclassification: There may be an unknown degree of ethnic group misclassification in death and hospitalization records since often this information is not collected directly from the injured person, but rather is assigned by whomever fills out the respective forms. In such situations, the assignment of ethnicity is often based on the patient's surname.

Terminology: Population rates for this *Profile* are based on U.S. census counts and intercensal estimates from the California Department of Finance. The four major race/ethnicity groups used in these estimates are termed Black, White, Hispanic and Asian/Other. Hence, throughout this report these four race/ethnicity categories are used and we have kept the terminology consistent.

Note from the authors: As work on this document progressed it became apparent how complex the field of injury prevention is, and how much information might be useful and interesting to include. For every single question we tried to address, ten more came up. This profile is intended to be a summary of the problem of injury in San Francisco. For those whose programmatic activities require information on a level more detailed than we were able to include here, we encourage you to call or write with questions. Questions and comments can be addressed to: Connie Heye, San Francisco Injury Center, Paramedic Division, 2789 25th Street, San Francisco, 94110. Phone: (415) 206-7849 Fax: (415) 206-7815.

Overview of Injury

Overview: Causes of Injury Deaths



Leading Causes of Injury Death
San Francisco, 1986-1991
(N=3439)

Figure 1.

Poisoning/drug overdose was the leading cause of injury death among San Franciscans from 1986 through 1991. Falls, firearms and motor vehicles were nearly equivalent as the next three leading causes of injury death.

Injuries are classified by the object or mechanism that caused the injury. By order of magnitude, the leading causes of injury death in San Francisco for all years 1986 through 1991 combined were poisoning/drug overdose, firearms, falls, motor vehicles, suffocation, drowning, and fire and burns. Three thousand four hundred and thirty seven San Francisco residents died as a result of an injury from 1986 through 1991; that was an average of more than 11 deaths per week. Poisoning/drug overdose was the leading cause of death claiming 930 lives, or 27% of the total. Falls, firearms and motor vehicles were nearly equivalent as the next three leading causes of injury death. Included in the "motor vehicle" category are car and motorcycle drivers as well as passengers, pedestrians and bicyclists as long as their death resulted from a collision with an automobile, either in or out of traffic. The "other" category includes deaths resulting from cutting and piercing (5% of all injury deaths), other forms of transportation, and "other and unspecified" causes as reported on the original death record.

Overview: Causes of Injury Hospitalizations

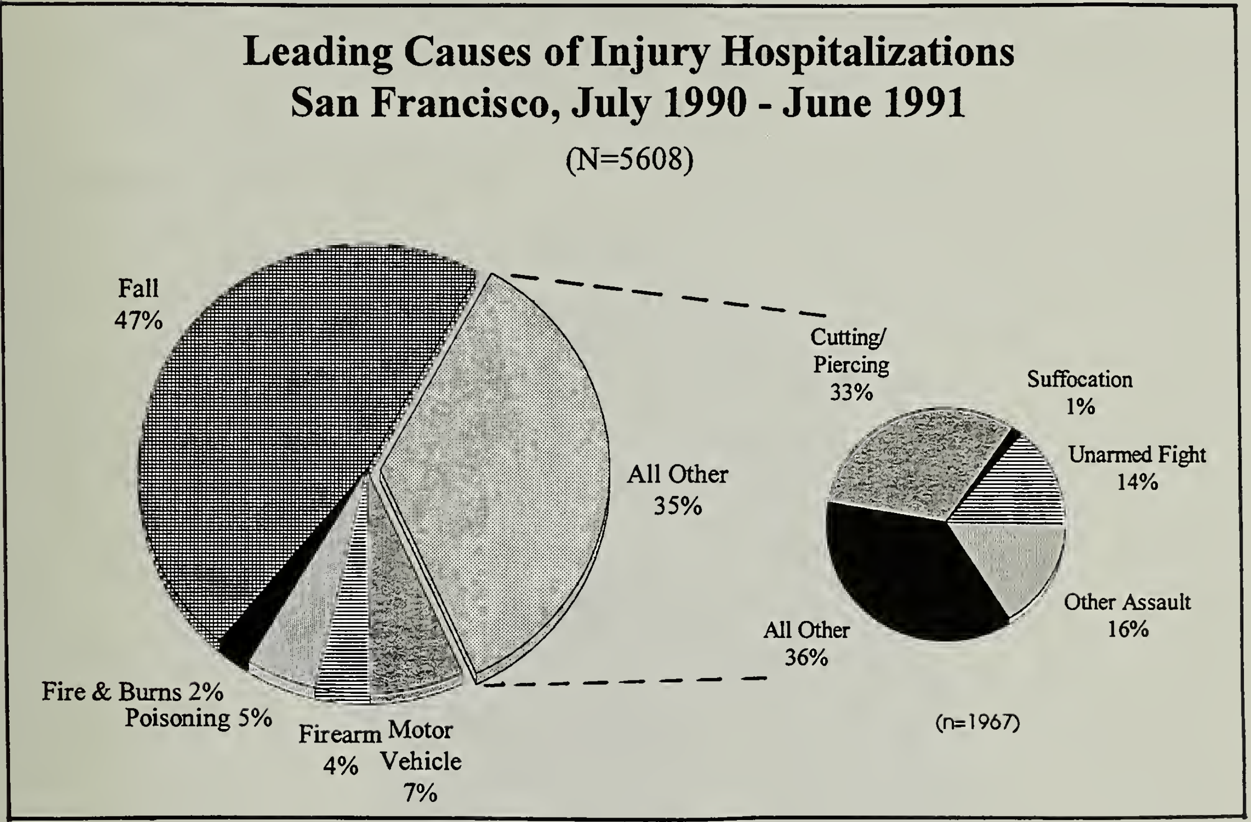


Figure 2.

Falls were the leading cause of hospitalization for injuries among San Franciscans.

Falls accounted for a much larger proportion of injury hospitalizations than they did injury deaths. Motor vehicles, firearms, and poisoning/drug overdose each accounted for a smaller share of hospitalizations than they did deaths. This can be attributed, in part, to the greater lethality of these latter three causes. People who sustain an injury from a motor vehicle, firearm, or poisoning, are more likely to die than those who fall.

The "all other" category includes hospitalizations that resulted from "cutting and piercing" (including stabbing), fights, assaults, and records which were E coded as "other" or "unspecified" injury on the original hospital discharge record. It can be noted that cutting/piercing accounted for 11% of all injury hospitalizations, making cutting/piercing second only to falls as a leading cause of injury hospitalizations.

Overview: Reported Intent of Injury Deaths

Traditionally, injuries have been classified by intent as well as by cause. Those that are classified as purposefully inflicted by self (suicide and suicide attempts) or another (homicide and assaults) are considered intentional injuries. Intentionality can be a subjective categorization because those involved in an injury event may not be alive present and/or willing to answer questions. Categorizing injuries by intent mirrors society's traditional placement of responsibility for injury prevention: homicide is a criminal justice problem, suicide is a mental health problem, "accidents" are a safety problem.

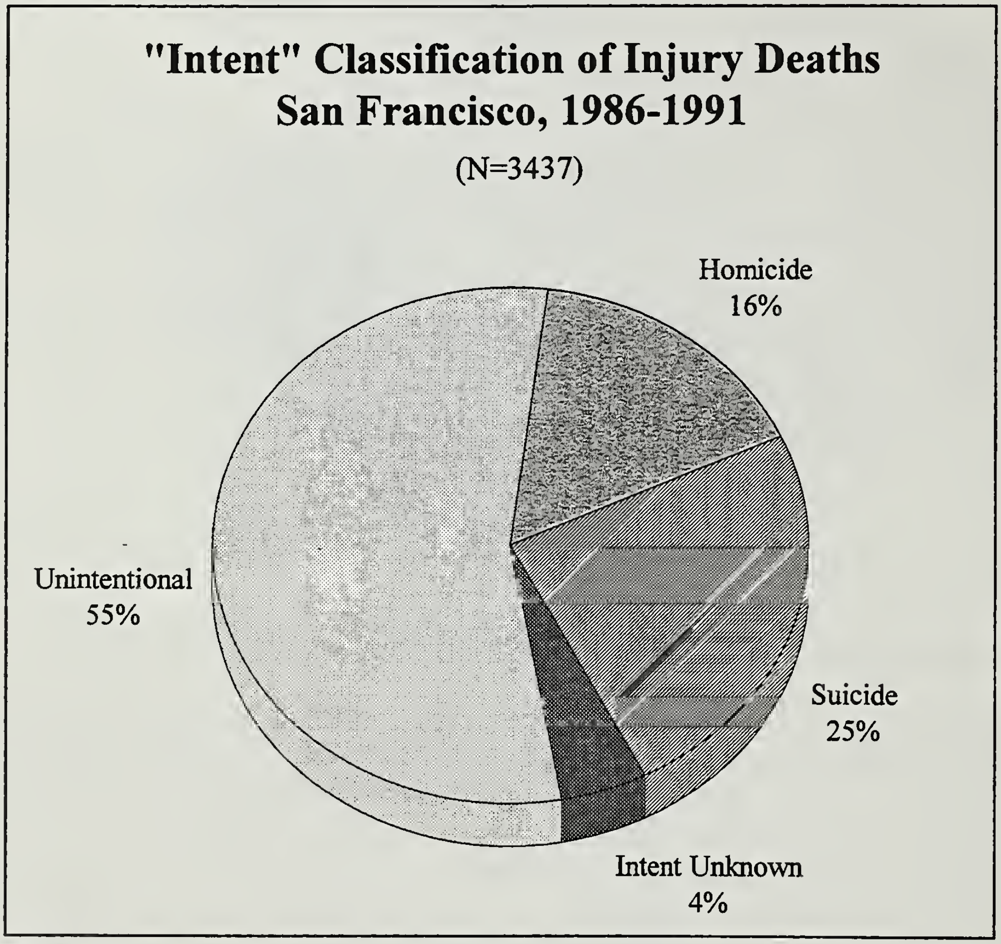


Figure 3.

There were consistently more suicides than homicides in San Francisco from 1986 through 1991.

More than half of all injury deaths in San Francisco were ruled unintentional. There were consistently more suicides than homicides in San Francisco in the six years considered; overall suicides out numbered homicides 844 to 557, or 25% to 16% respectively. Two cases of legal intervention are included as homicides (people killed by law-enforcement agents in the line of duty).

Overview: Reported Intent of Injury Hospitalizations

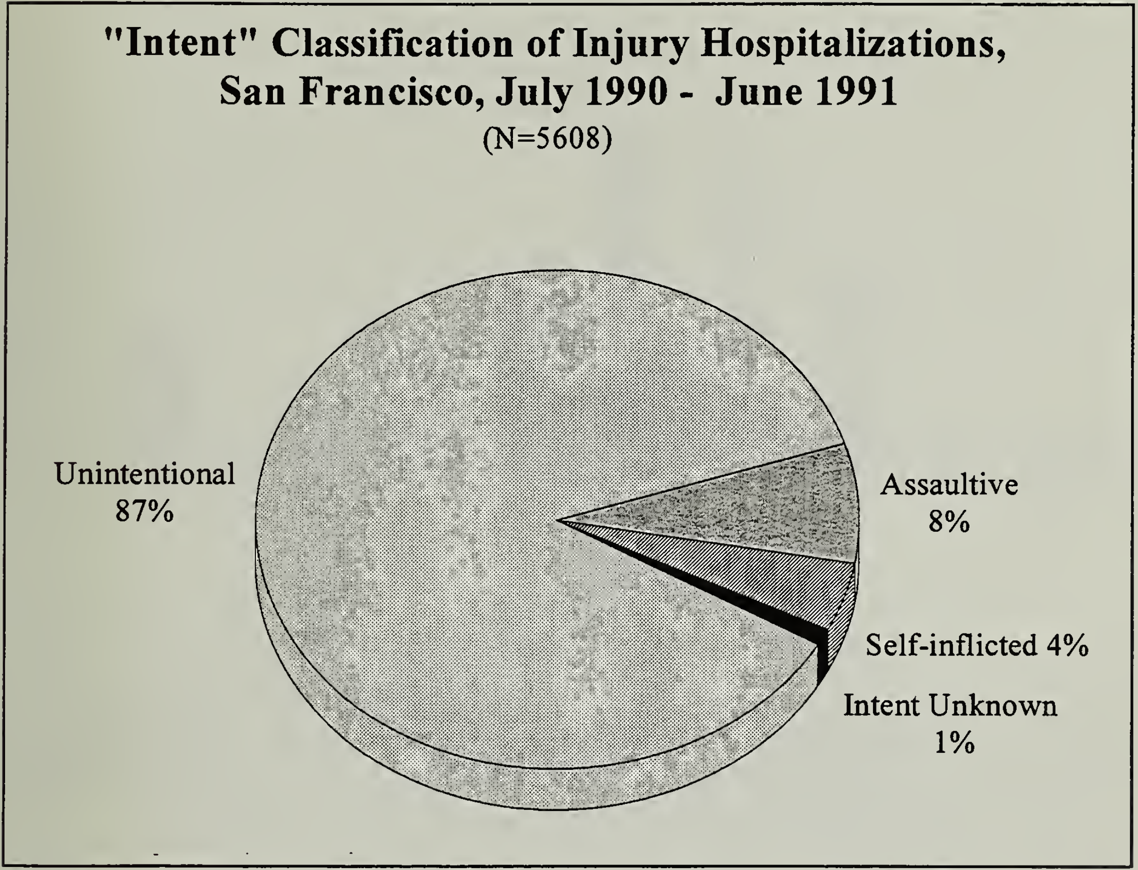


Figure 4.
The vast majority of hospitalizations for an injury were recorded as resulting from an unintentional act.

The vast majority of injury hospitalizations (87%) were ruled unintentional. Difficulties in assigning "intent" on hospital discharge records may produce an undercount of intentional, non-fatal injuries. For example, it is difficult to assign "intent" to poisonings associated with drug overdoses. In addition, studies have shown that medical professionals do not often identify battering and domestic violence as a cause of injury among women (8). The same is suspected of child abuse. Training of medical professionals to better identify and report injuries caused by abuse will provide better services for abused patients and better data to document the problem of intentional, non-fatal injuries.

Injury Deaths: Counts and Rates

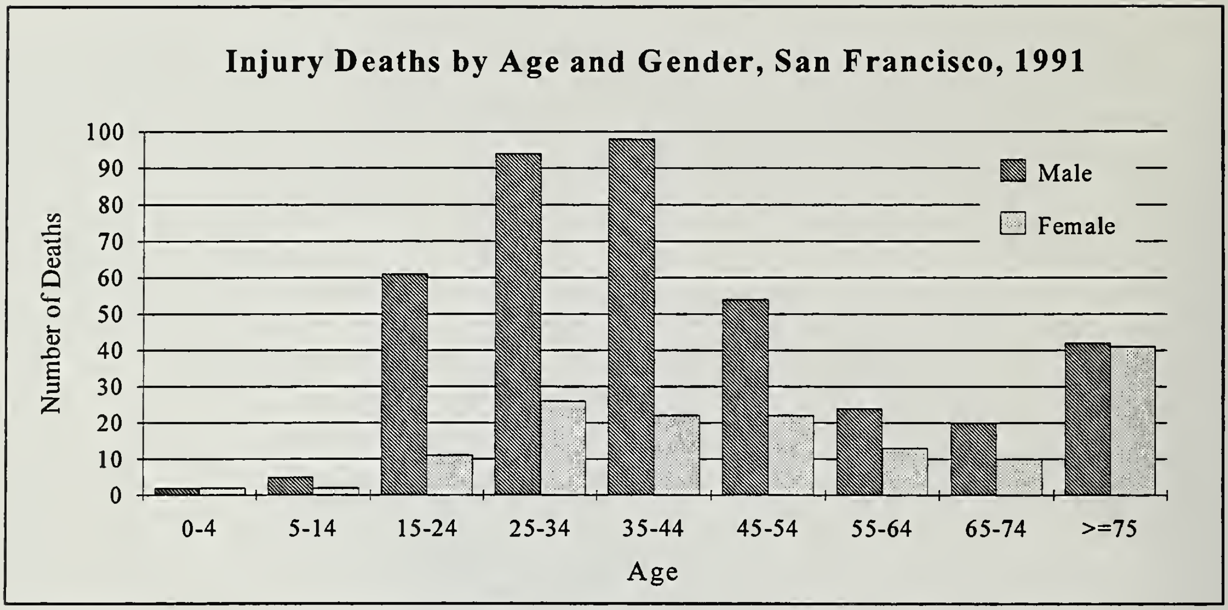


Figure 5.

The largest group of people who died of injuries were 25 to 44 year old males.

Counts and rates of injury mortality present two different patterns. Counts of injury mortality show the total number of individuals who died in each age and gender group. Rates of injury mortality take into account the number of people alive in that age and gender group, and therefor show more clearly the risk of injury for a given group. Overall, males had more than twice the risk of dying from an injury than females.

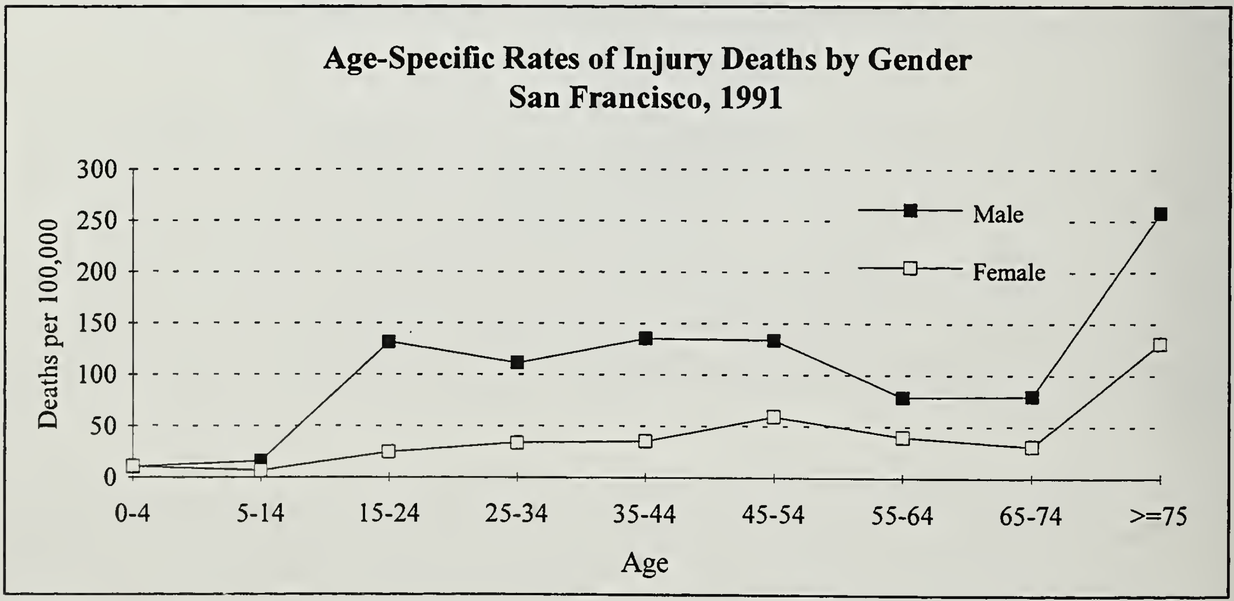


Figure 6.

The rate of dying from an injury is highest among the elderly.

Injury Hospitalizations: Counts and Rates

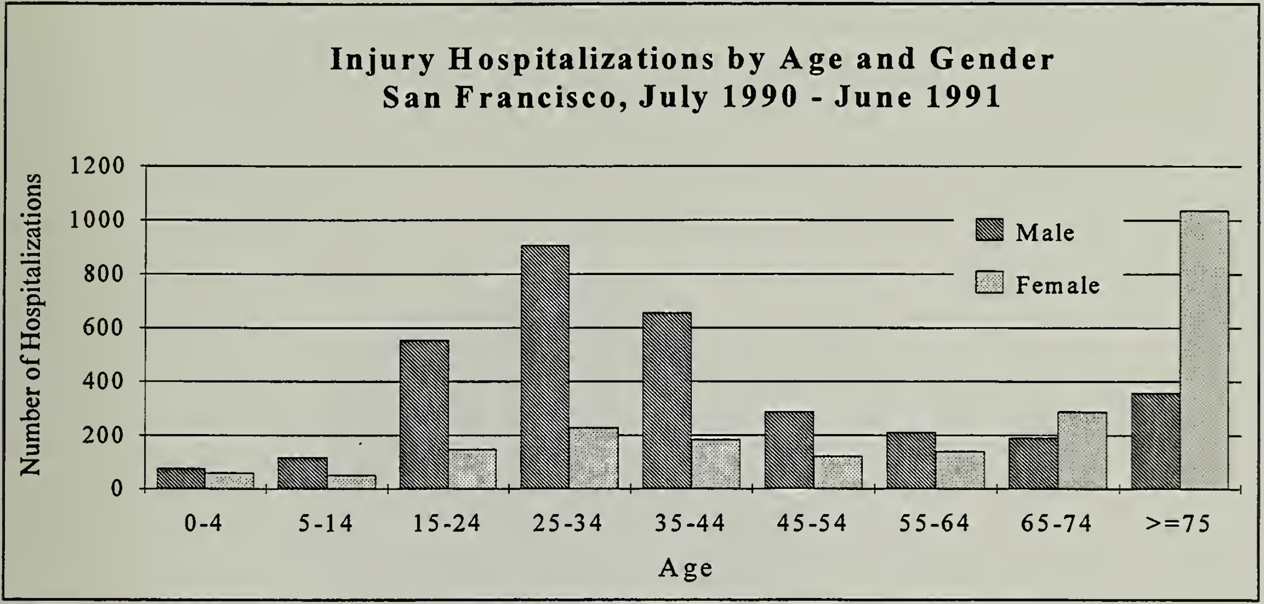


Figure 7.

Counts of injury hospitalizations show a similar but not identical pattern as injury deaths. Generally speaking, more males than females were hospitalized for injuries, with the peak age group 25-34 year olds, slightly younger than the peak age of injury deaths among males. Among senior citizens 65 years and older, however, more women than men were hospitalized for injuries. This is true even after taking into account that women live longer than men, as is shown in figure 7 which displays hospitalization rates. Eighty-five percent of injury hospitalizations among the elderly were due to falls.

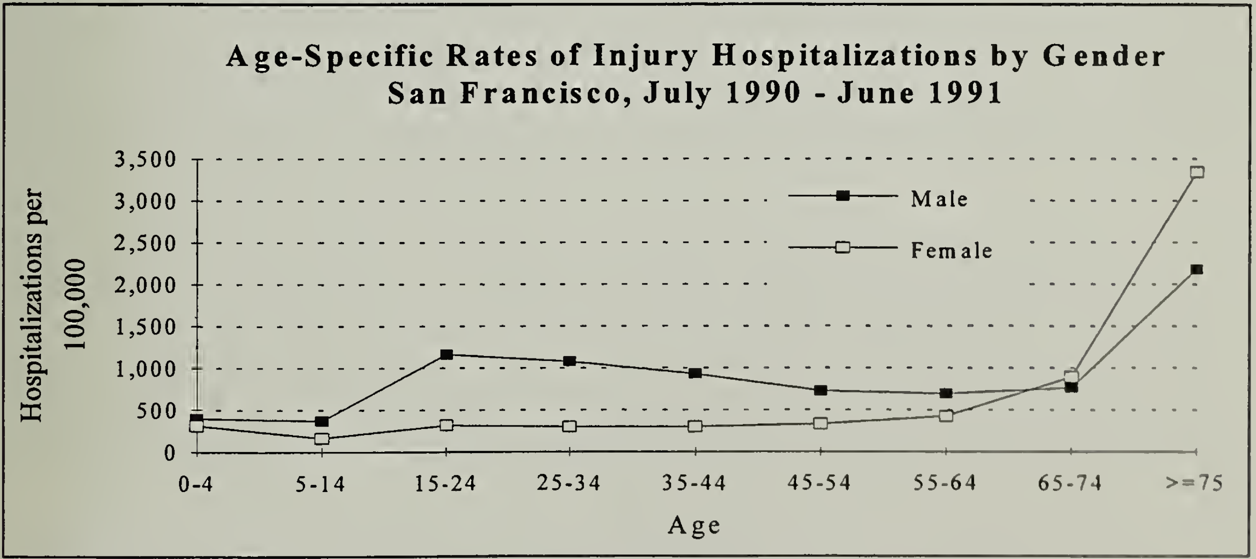


Figure 8.

Hospitalization rates for injury are higher for males than for females at every age except after 64 years.

Reported Charges of Injury Hospitalizations

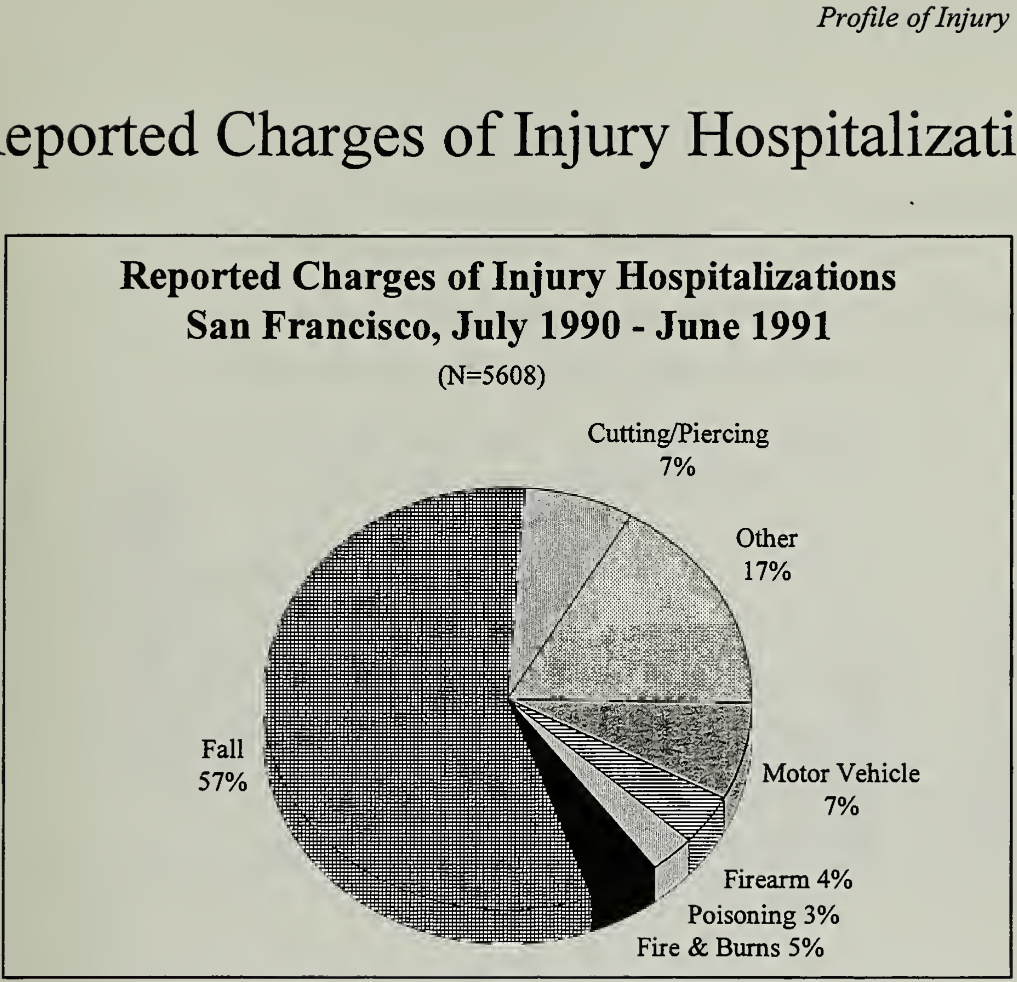


Figure 9.

The total charges generated for all injury hospitalizations for San Francisco residents for one year was $60,271,720. (Kaiser Hospitals do not generate claims and are therefore not included in this total.) "Total charges" include fees for "daily hospital services, ancillary services, and any other services defined as patient care". These charges do not include professional fees, including physician fees. Nor do these charges include subsequent hospitalizations for the same injury, or any kind of follow-up care or rehabilitaion. Total charges reported here represent bills that were generated, not revenues that were collected.

Falls were the single mechanism of injury that generated the greatest sum of charges ($34,189,265). Falls were also the single most common cause for injury hospitalization, but even so, they accounted for a disproportionate sum of charges (falls accounted for 47% of all injury hospitalizations and 57% of charges). The great amount of charges generated may relate to the fact that falls often incur complications, especially among the elderly who tend to have long periods for recovery. Hospitalizations for fire/burns also generated a disproportionate sum of charges. While burns accounted for 2% of hospitalizations, they accounted for 5% of charges.

Hospitalization charges for injury are just one component of the "cost" of injury. The true "cost" of injury includes long term care and rehabilitation, lost income, pain and suffering, and all other human and economic expense associated with disability and premature death. *The Cost of Injury* addresses these issues and estimates more complete "cost" figures for the national burden of injury.

Comparison of Injury Death Rates: San Francisco, California, and the U.S.

By Cause

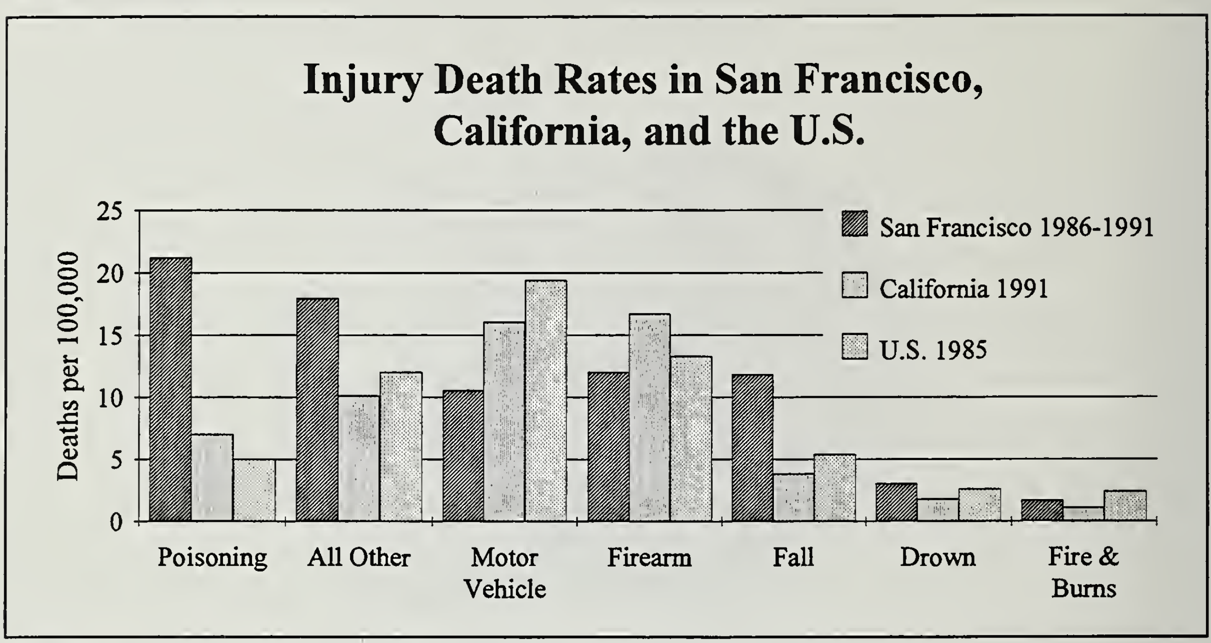


Figure 10.

Overall, the injury death rate in San Francisco was 78.4 per 100,000 for the years 1986-1991, compared with 56.6 per 100,000 for the state of California in 1991, and 60.3 per 100,000 for the United States as a whole in 1985.

San Francisco's injury mortality profile is consistent with the fact that it is a dense urban area. Poisoning/drug overdose death rates are about four times higher in San Francisco than they are in either California or the U.S. At the same time, the rate of motor vehicle deaths rates is 50-75% lower.

The rate of deaths from falls is more than twice as high in San Francisco as compared to California and the nation; there are at least two possible reasons for this difference. First, San Francisco has a relativly large elderly population. 14.5% of the city's population was 65 years or older in 1990 compared with 10.5% for the state as a whole. Second, there may be especially large variation associated with the reporting of falls as a cause of death. Falls more so than other injuries may precipitate a sequence of events which lead to death, especially among the elderly. Hence falls per se may not be coded as the underlying cause of death if there are intervening conditions such as pneumonia. To the extent that San Francisco is vigilent about coding falls as the underlying cause of death, more such deaths will be reported for the city vis a vis California and the nation.

By Intent

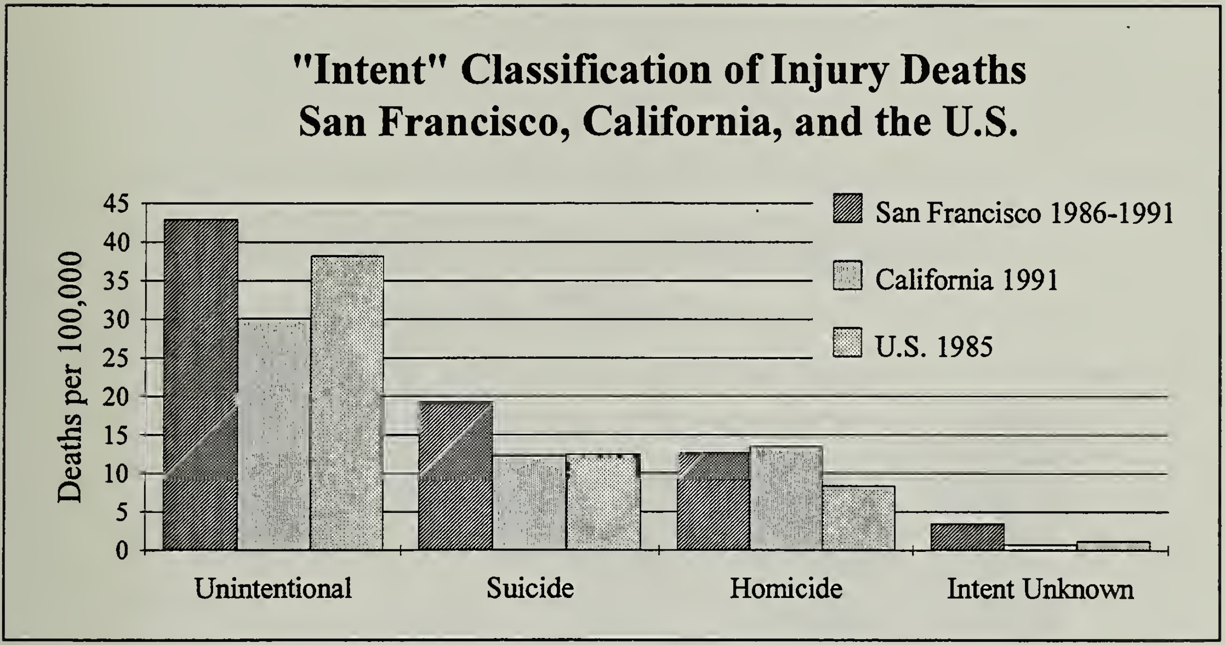


Figure 11.

In terms of intent, San Francisco has rates higher than the state and the nation in every category except homicide where the rate of death is roughly equal to that in California. The rate of suicide in San Francisco was notably higher than the rates in California or the United Sates.

Caution must be used in interpreting the assigned intent of an injury. Intent can be a subjective decision, and is made after the injured person is dead. Practices of recording information may vary from locale to locale. In San Francisco there was a relatively high rate of injury deaths classified as "intent unknown". If a large proportion of those were homicides, revised estimates could place San Francisco's homicide rate at or beyond that of California.

Comparison of Injury Hospitalization Rates: San Francisco and the U.S.

By Cause

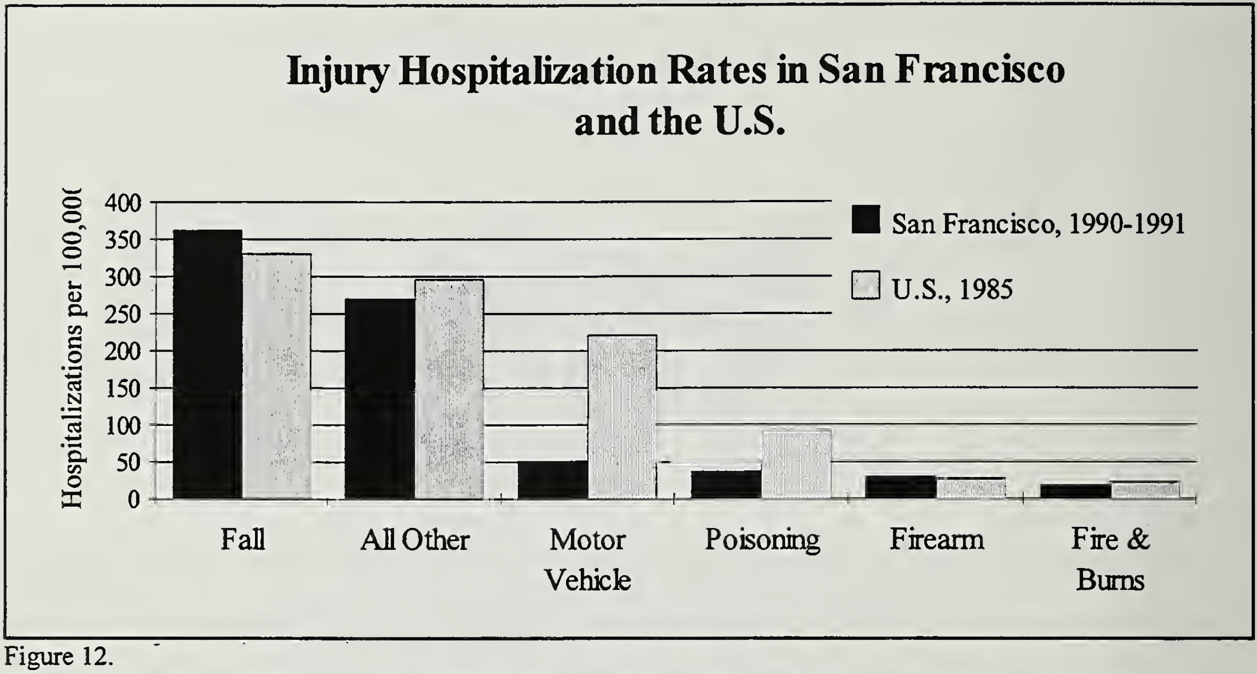


Figure 12.

Overall, the hospitalization rate for injuries in San Francisco was 769.6 per 100,000, in 1990-1991 compared to 989.9 per 100,000 in 1985 for the United States as a whole. (Data for California were not available).

San Francisco had less than one-quarter the rate of motor vehicle related hospitalizations compared to the nation, and slightly higher rate of hospitalizations due to falls. These trends are consistent with the rates seen for injury deaths.

The rate of hospitalizations for poisoning/drug overdose in San Francisco was about half of what it was for the U.S. This is surprising in view of the fact that the rate of poisoning/drug overdose deaths was much higher for San Francisco than for either the state or the nation. This apparent discrepancy between a relatively high death rate and a relatively low hospitalization rate may be due to differences among sub-populations that are included under the title "poisoning/drug overdose". The category poisoning/drug overdose is explored further on pages 19-33.

By Intent

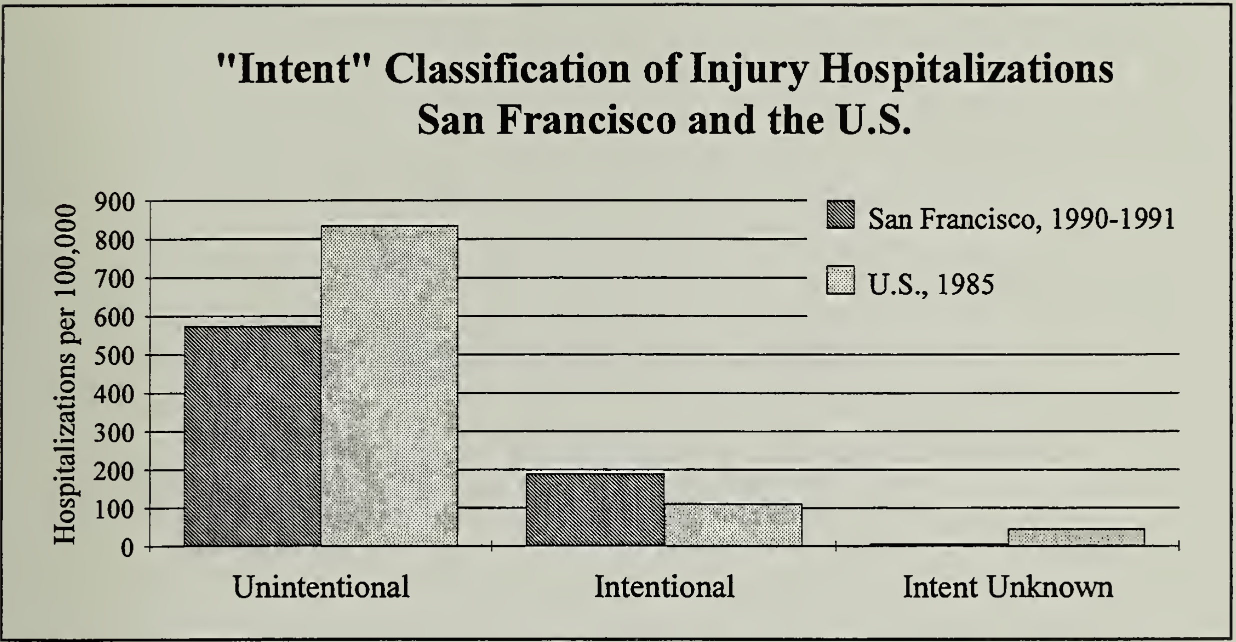


Figure 13.

"Intentional injuries" refer to non-fatal assaults and self-inflicted injuries.

Again, intent classification is not an exact science and intent groupings must be interpreted with caution. It appears that San Francisco has a higher rate of hospitalizations due to intentional injuries and a lower rate of hospitalizations for unintentional injuries compared to the national picture.

Poisoning and Drug Overdoses

Poisoning/Drug Overdoses

Poisoning has been defined as an "actual or suspected contact with any substance which, when ingested, inhaled, absorbed, applied to or injected into the body, may cause damage to structure or disturbance of function to living tissue" (1). Hence the category "poisoning" includes many different toxic syndromes associated with different populations, including substance abuse, unintentional ingestions by children, suicide attempts among adolescents and adults, and occupational toxic exposures.

This section, like the other sections, considers poisoning/drug overdoses as reported in death records, hospitalization discharge records, and San Francisco General Hospital Emergency Department visits. In addition, this chapter considers data collected by the San Francisco Medical Examiner's Office (as another source of poisoning death information), the Drug Abuse Warning Network (DAWN) (as another source of poisoning emergency room visits), and the San Francisco Bay Area Regional Poison Control Center.

Deaths

Poisoning/ drug overdoses were consistently the leading causes of injury deaths in San Francisco from 1986 through 1991, during which time they accounted for 27% of all injury deaths.

From 1986 through 1991, poisoning/drug overdose resulted in death for 930 San Francisco residents. Males made up 76% of these deaths and 68% of them were between the ages of 25 and 44. Counts of poisoning/drug overdose deaths for 1986-1991 by age and gender are shown below.

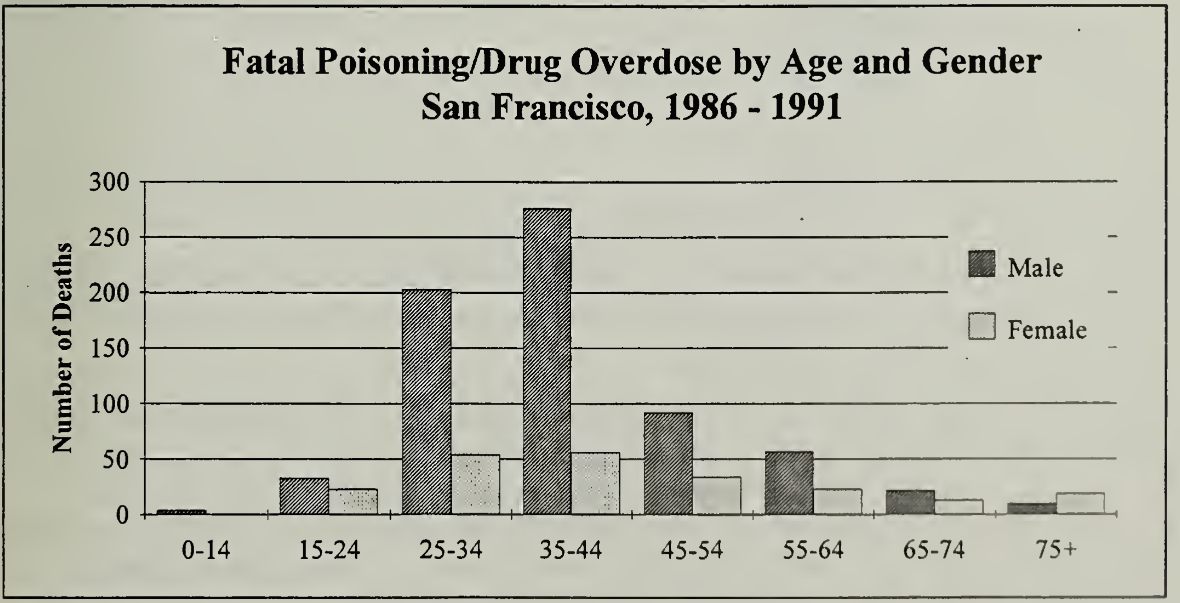


Figure 14.

What accounts for the tremendous clustering in deaths among males aged 25-44 years? The cause of death for the vast majority of this subgroup (94%) was poisoning with drugs or medications (including street drugs), as opposed to poisoning with other solids, liquids or gases. Of the drug deaths that occurred in this subgroup of men, the most common agents were cocaine (13%), heroin (23%), tranquilizers (9%). Of all the deaths in this group of men (drug and non-drug), 76% were classified as unintentional, 17% as suicide, and for 7%, the intent was recorded as unknown. In general, street drug overdoses among users are classified as unintentional because the outcome (death) was not intentional, even though the exposure was deliberate. The agents of all poisoning/drug overdose deaths for San Franciscans from 1986-1991 are shown in figure 15.

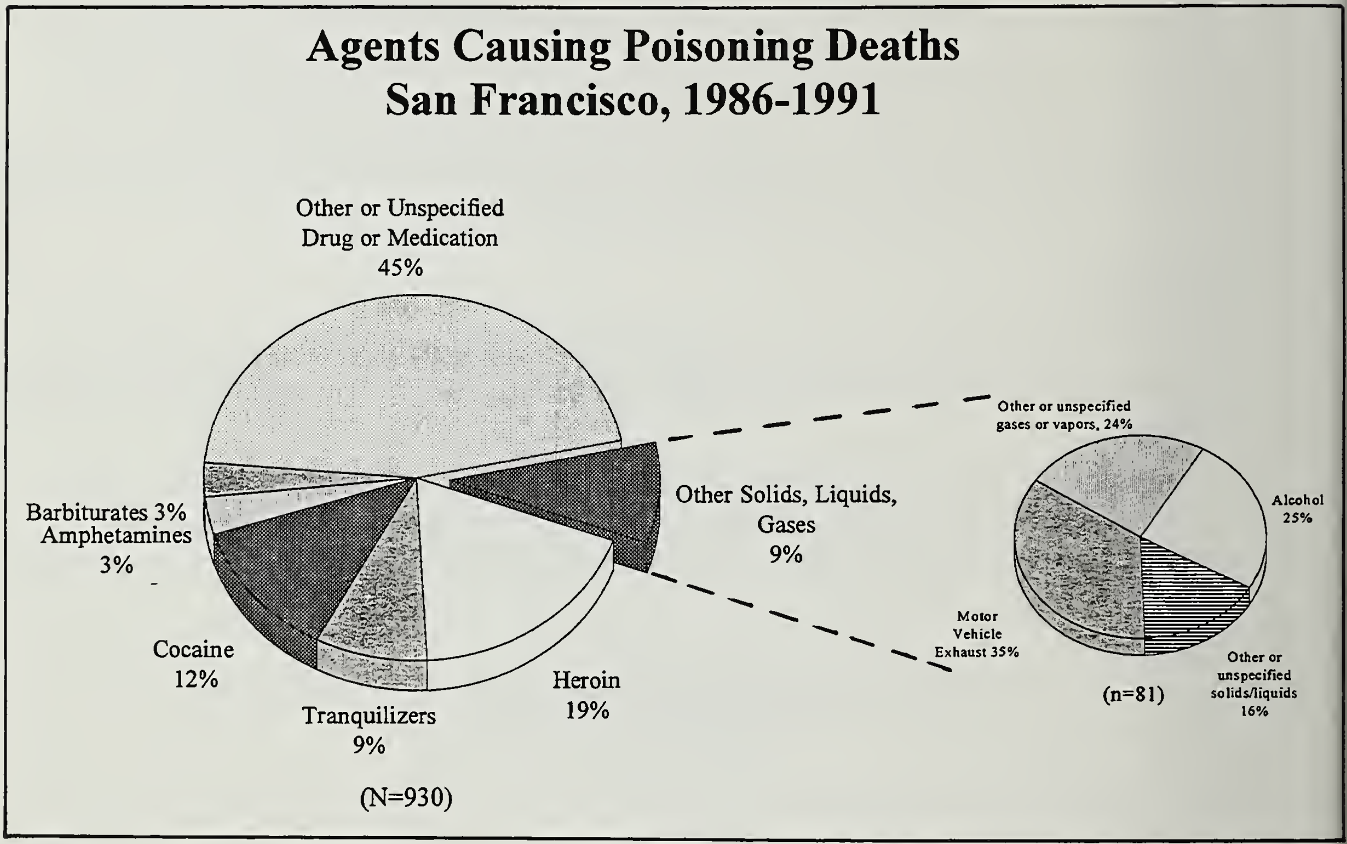


Figure 15.

Nationally, about 60% of poisoning deaths were due to drugs or medications and about 40% were due to other gases and liquids (2). In San Francisco, over 90% of poisoning deaths were due to drugs or medications[1].

This difference is typical for an urban area; Baker, et al, report that the death rate from opiate poisoning in central cities is about 15 times that of most rural areas and the death rates for cocaine poisoning deaths are about twice as high in metropolitan areas as they are in non-metropolitan areas (2). Heroin and cocaine were the single most common poisoning agents that were identified on the death certificate. The majority of cases included under "other or unspecified drug or medication" in figure 15 were recorded as such in the original record.

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[1] Baker et al consider death records as we do here, so this difference cannot be explained by different sources of data.

Of the 930 poisoning/drug overdose deaths from 1986-1991, 625 (67%) were considered unintentional, 239 (26%) suicide, and 66 (7%) were of unknown intent. (Again, street drug overdoses are generally classified as unintentional).

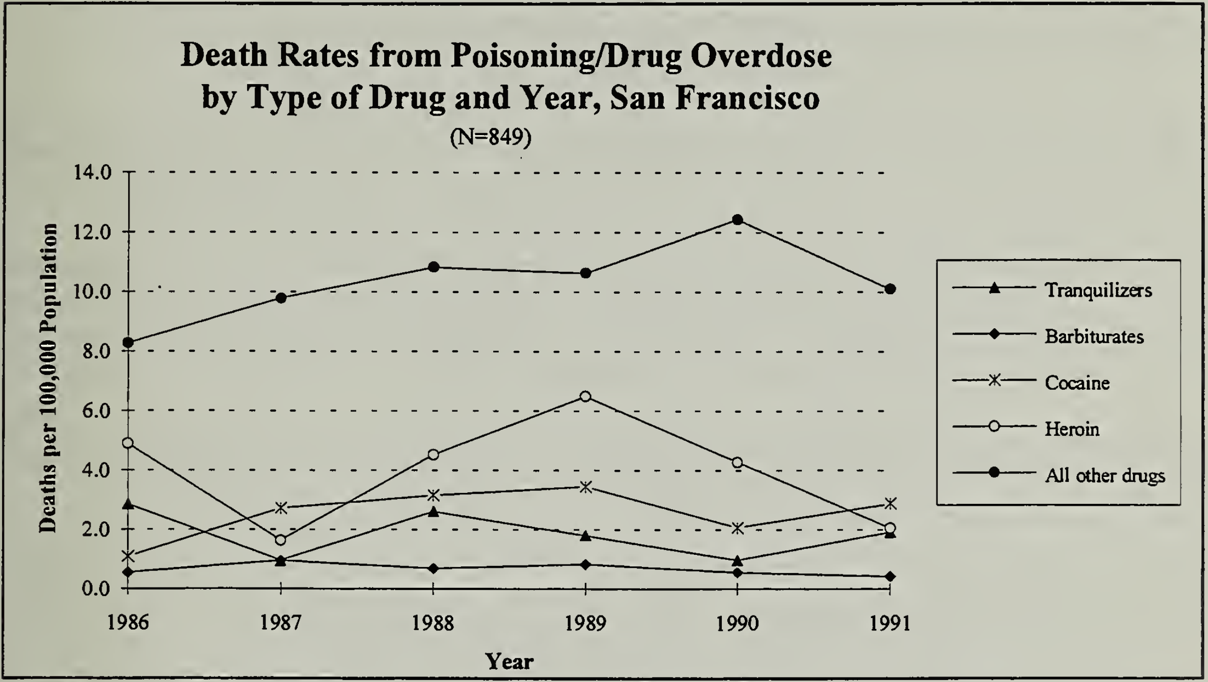

Figure 16.

Figure 16 shows yearly trends of poisoning deaths among San Franciscans caused by drugs and medications. The total number of deaths peaked in 1989 at 168 deaths and subsided somwhat over the next two years. (Total deaths due to poisoning from drugs and medications from 1986 through 1991 were as follows: 130, 118, 159, 168, 147, 127.) Lack of specificity on the original death certificate means that a great many poisoning/drug overdose deaths were recorded as caused by "other", "unspecified" or "unknown" drugs. Included in the category "all other" in figure 16 are 31 deaths due to amphetamines, 9 due to antidepressants, and 30 due to "analgesics, antipyretics, and antirheumatics" --a category which includes heroin[2], as well as aspirin and acetaminophen. Overall, it appears that there has been an increasing trend in rates of death caused by drugs. Heroin has the highest rate of death associated with any single drug, and it also has the most yearly variation.

Nationally, it has been shown that fluctuations in opiate-poisoning mortality coincide with variations in the flow of heroin into the country (2). While such an analysis is outside the scope of this profile, supply considerations may explain, in part, yearly variations in street drug deaths.

Records from the Medical Examiner's office for the city of San Francisco shed further light on specific drug death rates and trends. The Medical Examiner is appointed by law to investigate many types of death, including all those caused by poisoning and drug overdose. Hence the

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[2] It is possible to break heroin out in its own category only for cases where the death was ruled unintentional (which is how most heroin deaths are classified).

Medical Examiner's office performs toxicity testing on every poisoning/drug overdose death, making their records much more specific in terms of the agent of death, than death certificate records. However, the presentation of death counts in Medical Examiner reports differs from death certificate counts used in this profile in at least two respects. First, Medical Examiner data is organized around the fiscal year instead of the calendar year. Second, San Francisco Medical Examiner reports include all deaths which occur in San Francisco; the death certificate data on which this profile is based is chosen on the basis of San Francisco residency.

Medical Examiner's data for fiscal years 1985-1991 show exactly the same yearly trends as do death certificate data, but with much greater absolute numbers of deaths. There were approximately 70 deaths due to heroin in fiscal year 1985-86 according to the Medical Examiner's Office. This number dropped off precipitously to about 42 the next year, and rose again to a high of about 110 deaths in fiscal year 1989-90. These counts follow the same yearly pattern as heroin deaths recorded on death certificates (figure 16), but the totals are about double. Counts of heroin deaths from death certificates are 36 in 1986, 12 in 1987 and 31 in 1990.

Deaths due to cocaine presented a similar scenario. The Medical Examiner's report shows an increase of deaths up to 1989, but the increase is steadier and more dramatic than the death record data presented here, and again counts from the Medical Examiner's Office are about double the counts reported on death records. Since Medical Examiner records include all drug deaths that occur in San Francisco, it would be expected that they include more deaths than the set of death certificate records which consists of San Francisco residents. That the Medical Examiner's counts were on the order of twice what the death certificates indicated for heroin and cocaine suggests a great deal of missclassification of these two drugs into "other" and "unknown" categories.

It is important to note that poisoning deaths included here as injuries are those deaths that resulted from from acute poisonings including overdose, and not those that resulted from complications of long-term drug or alcohol use, such as cirrhosis. Deaths resulting from long-term use of drugs or alcohol are most likely classified as "natural" deaths due to drug dependence. If a death is classified as "natural" instead of as "accidental" (due to drug overdose), it would not receive an E code associated with the death certificate. In the Injury Fact Book, Baker et al report 12,951 poisoning/drug overdose deaths nationwide for 1987 (based on death certificate data). During that same time period, an additional 6,964 deaths were recorded as caused by "alcohol dependence or abuse" or as "other or unspecified drug abuse or dependence", and were not assigned E codes. In other words, Baker et al found that for every two drug overdoses which were assigned E codes, there was at least one death which was due to drug dependence per se and did not receive an E code. If the same ratio of E coded to not E coded drug-related deaths existed in San Francisco from 1986-1991, then it can be estimated that there were an additional 500 drug-related deaths that have been excluded from traditional injury analysis that is based on E-coded records. For more information on E codes and their importance in grouping injury data, see pages appendix A, page 90.

Hospitalizations

Hospitalizations for poisoning/drug overdose show a slightly different picture than deaths due to poisoning/drug overdose. Infants and children are included among hospitalizations; their absence among poisoning deaths indicates that although poisoning incidents are a problem among children, they are rarely fatal. There were 13 hospitalizations of children under 5 years old for poisonings in the second half of 1990 and the first half of 1991. In all but 1 case, the poisoning agent was a drug or alcohol. Included among the drugs were tranquilizers, heroin, and "other specified drug"[3].

Males aged 25 to 44 account for the greatest number of hospitalizations for poisoning/drug overdose, as they do for poisoning/drug overdose deaths. A consideration of the 97 hospitalizations of young men in this age group reveals that over half of the injuries were ruled intentionally self-inflicted. Eighty-nine percent of these hospitalizations resulted from poisoning with a drug or medication; 11% resulted from poisoning with another solid, liquid, or gas. Among this group of men, tranquilizers were the single most common drug listed, accounting for about one-third (34%) of all poisonings and nearly half (44%) of the self-inflicted poisonings.

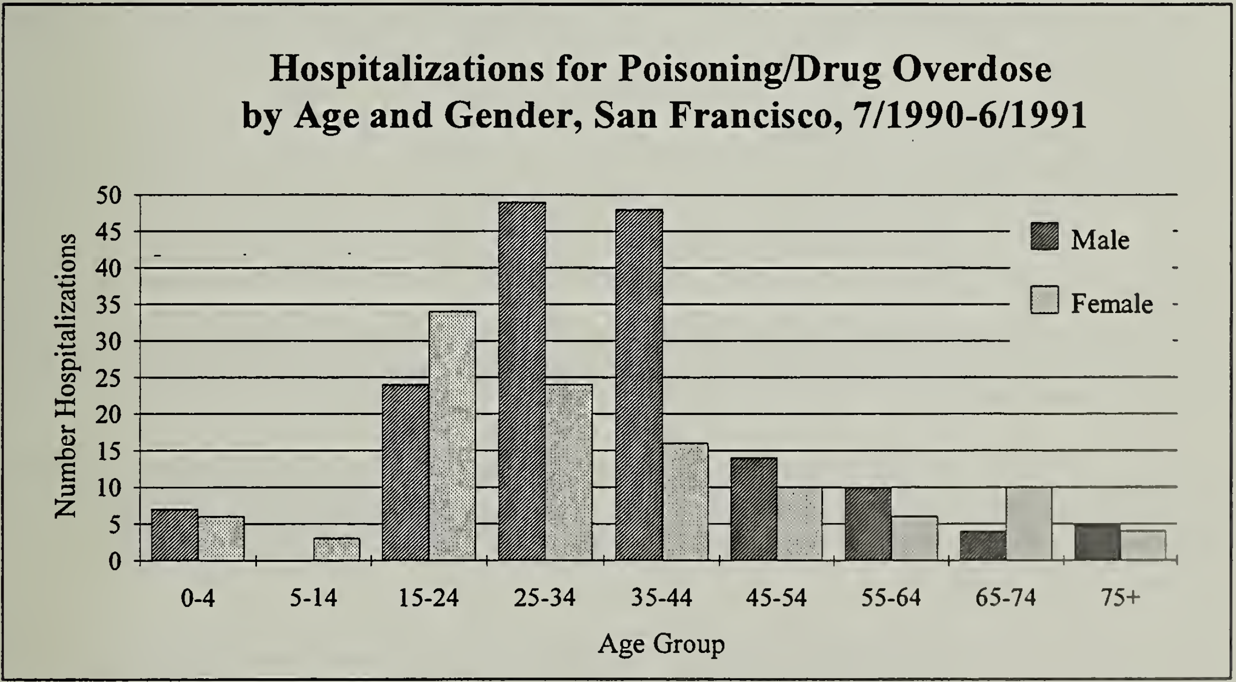

Figure 17.

Poisoning/drug overdose hospitalizations among females peak in the 15 to 24 year age group where there are more hospitalizations for young women than for young men. Of the 34 hospitalizations of young women in this age group 28 (82%) were considered intentionally self-inflicted. The three most common drugs listed for this group of young women were "analgesics, antipyretics and antirheumatics" (n=11) which includes heroin, aspirin and acetaminophen, tranquilizers (n=5) and "other specified drug" (n=7).

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[3] "Other specified drug" is the classification used when a particular drug agent is identified in the original record, but the agent is uncommon and therefor does not have a designated E code. "Other specified drug" is therefor differentiated from "other unspecified drug", in which the agent is not identified anywhere.

The distribution of poisoning agents associated with all poisoning hospitalizations for San Francisco residents from July 1990 through June 1991 is shown in Table 1. As was the case with deaths, the vast majority of poisonings/drug overdose hospitalizations were caused by drugs and medications.

Table 1. Poisoning and Drug Overdose Hospitalizations San Francisco, July 1990 - June 1991

Agent	Unintentional	Self-Inflicted	Undetermined	Total	%Total
Barbiturates	1	8	2	11	4.0
Tranquilizers	22	55	4	81	29.6
Heroin	6	NA[a]	NA[a]	6	2.2
Analgesics, antirheumatics, antipyretics*	0	35	4	39	14.2
Cocaine	5	NA[a]	NA[a]	5	1.8
Other or unspecified drugs and medications	47	42	7	96	35.0
Alcohol	8	NA[a]	NA[a]	8	2.9
Other or unspecified solids or liquids	13	9	1	23	8.4
Motor vehicle exhaust	0	2	0	2	0.7
Other or unspecified gases or vapors	2	1	0	3	1.1
Total	104	152	18	274	100.0

[a] Not separately identifiable.

* For the intent categories self-inflicted and undetermined, heroin does not have a designated E code of its own, but rather is included under the more general category "analgesics, antirheumatics, antipyretics", which also includes aspirin and acetaminophen.

Overall, more hospitalizations for poisoning/drug overdose were ruled self-inflicted than were ruled unintentional, by a margin of about 3 to 2. Tranquilizers accounted for 30% of all poisoning/drug overdose hospitalizations, and 68% of tranquilizer hospitalizations were considered self-inflicted.

The bill for one year of hospitalizations for San Francisco residents for poisonings/drug overdose amounted to $1,845,589 excluding Kaiser Hospitals. This charge estimation does not include follow-up inpatient psychiatric care. Further explanation of these charges is included under "Reported Charges of Injury Hospitalizations", p.13.

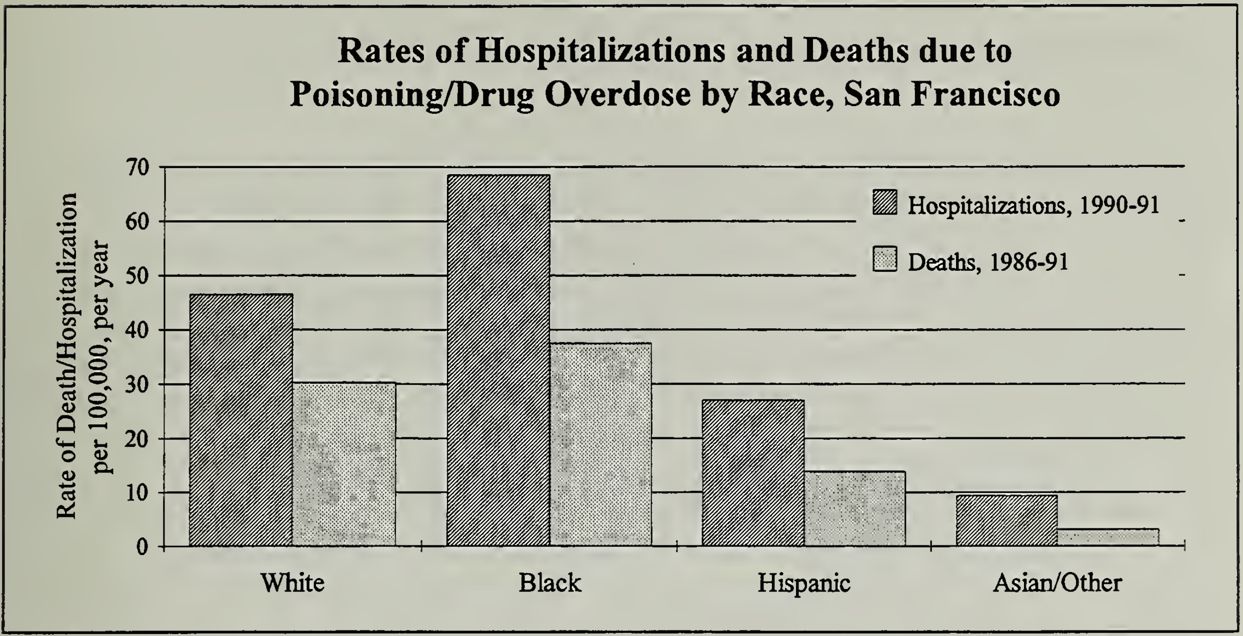


Figure 18.

Poisoning/drug overdose death and hospitalization rates were highest among Blacks and lowest among residents included under Asian/Other.

Emergency Department Visits

To understand poisoning/drug overdose visits to San Francisco General Hospital (SFGH) Emergency Department (ED), it is necessary to understand at least two things. First, San Francisco General is the city's only public hospital so it tends to get low-income patients who have few other resources. Second, ICD9 E codes are not required to be used in emergency departments. They are used in the emergency department at San Francisco General in conjunction with billing records. Their use in this context, however, is for billing purposes rather than for the purpose of accurately summarizing injury activity. One bias introduced is that not all patient records are assigned an E code. In an investigation of poisoning/drug overdose surveillance systems, Blanc et al found that no ICD9 code was assigned in 23% of records at SFGH ED for patients who visited the ER for poisoning/drug overdose in the first half of 1990 (4). To begin to compensate for this, records were selected by E code, as well as by whether key words such as "heroin", "overdose" or "alcohol" were included in the diagnosis. Searching in this way yielded 5,923 visits to the Emergency Department during 1992 in which the primary or subsequent diagnoses had to do with chemical, drug, or alcohol poisoning.

Of the 5,923 visits, 2,054 (35%) included some form of alcohol use; in 1,274 of these cases (22% of all poisoning visits) alcoholism or alcohol withdrawal was the primary diagnosis. An additional 7% of patients had a diagnosis of seizure. Nineteen percent of the patients had an E code for "overdose"; of those, 17% were coded specifically with "heroin overdose". An additional 56 patients (1%) had "crack use" as a diagnosis, 179 (3%) had mixed drug use, and 88 (1%) were diagnosed with "other psychotropics". One-hundred twenty-eight patients (2%) had an E code diagnosis for a fight or assault; an additional 6% had a diagnosis for laceration.

Drug Abuse Warning Network (DAWN)

The Drug Abuse Warning Network (DAWN) is a national surveillance system under the direction of the National Institute on Drug Abuse. Data for the Drug Abuse Warning Network is collected from Medical Examiners and Hospital Emergency Departments across the country. In San Francisco, San Francisco General Hospital's Emergency Department participates by collecting and reporting drug-related emergency room episodes.

Cases reported to DAWN are included on the basis of a drug mention; that is, a patient will be counted among the totals as long as his or her emergency visit included mention of a drug, regardless of whether the drug was the primary cause for the visit. It is also notable that DAWN data include alcohol use only when it is mentioned in conjunction with other drugs. Hence, a patient brought to the emergency room for alcohol intoxication would not be reported to DAWN unless s/he had used another drug as well.

There were a total of 4,175 drug-related episodes at San Francisco General Hospital's emergency room during 1992, which were reported to DAWN. Males outnumbered females by more than 2 to 1 (2,916 episodes versus 1,250 episodes, respectively). In ninety percent of the reported episodes, the patient was between 20 and 49 years old. Heroin and cocaine dominated the list of drug mentions. Heroin was mentioned in 34% of all episodes; cocaine in 28%. Of the heroin mentions, 61% (n=861) were cases in which heroin was the only drug mentioned; in 39% of mentions (n=561) heroin was used in combination with another drug. Of the cocaine mentions, 48% (n=565) were cases in which cocaine was the only drug mentioned; in 52% of mentions (n=604) cocaine was used in combination with other drugs. The motive given for heroin use was dependence about three quarters of the time; suicide was mentioned in 2% of visits, and for the remainder "psychic effect" was listed as the motive for use. For cocaine, dependence was reported in nearly two-thirds of cases; suicide in 3% and "psychic effect" and "other" for the remainder. Alcohol in combination with other drugs or medications was mentioned 913 times, or in 22% of all episodes.

Poison Control Center

The San Francisco Bay Area Regional Poison Control Center (SFPCC) is located adjacent to the Emergency Department of San Francisco General Hospital. The SFPCC provides immediate treatment advice and poison information, to both the public and to health professionals, in a ten-county area. The following information refers to only those calls which originated in San Francisco during the year 1992.

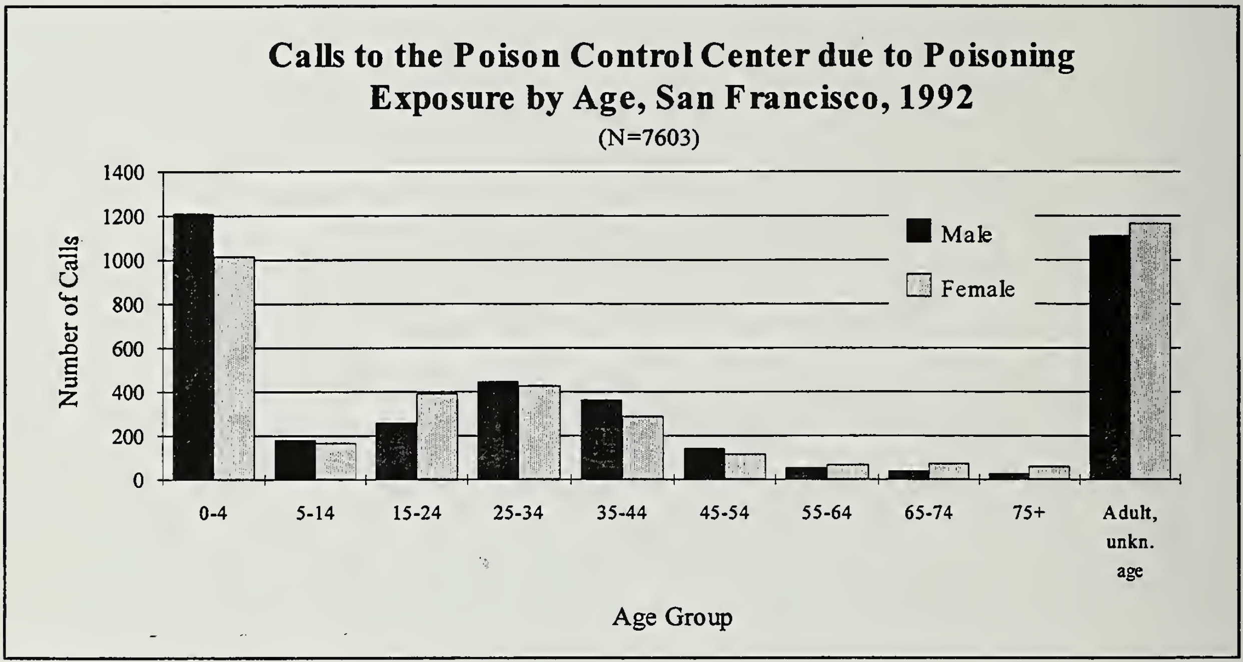


Figure 19.

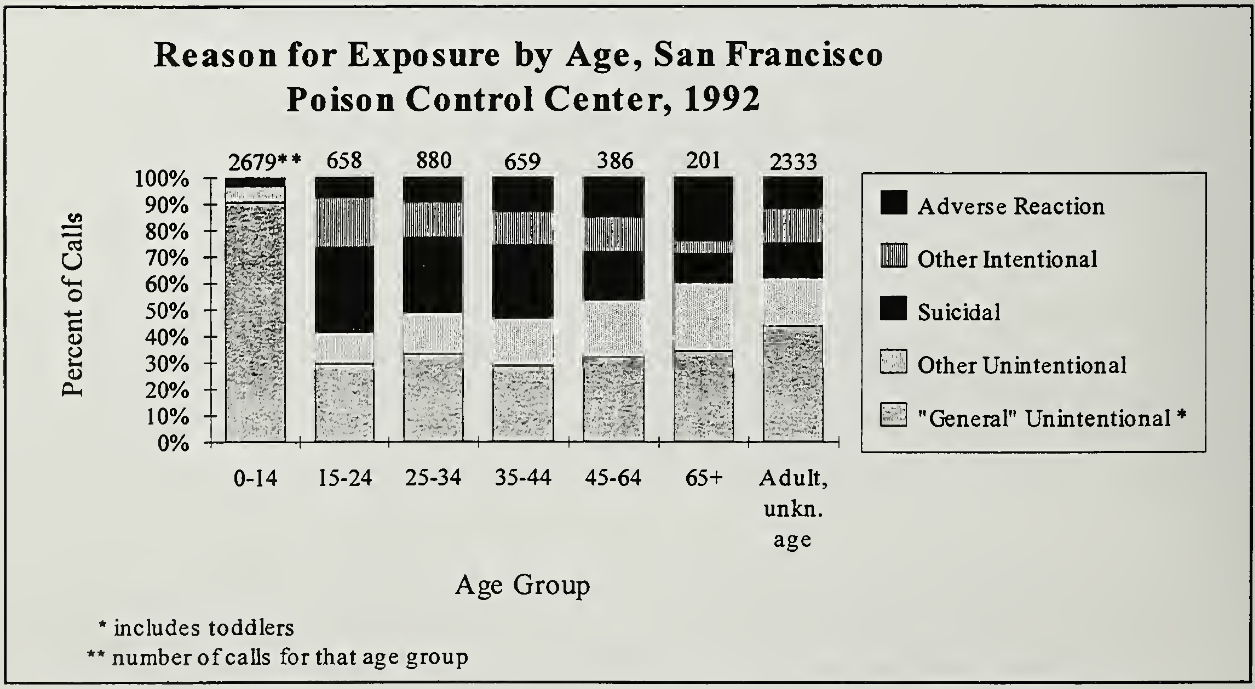


Figure 20.

Two thousand two hundred and twenty-five calls --42% of all calls to the Poison Control Center for information on an exposure-- were made on behalf of a child 0 to 4 years old. This is remarkable especially in view of the fact that children aged 0 to 4 comprised only 5% of all poisoning/drug overdose hospitalizations and less than 1% of all poisoning/drug overdose deaths for the years 1986-1991. The reason for the vast majority of these exposures reported to the Poison Control Center was recorded as "general" unintentional --usually refering to a curious toddler who ingested a toxic substance while exploring his or her environment. "Other unintentional" exposures (figure 20) include occupational and environmental exposures, as well as cases of unintentional misuse of medication in which the use was deliberate but the misuse was unknowing.

There were more calls for males than females at every age group except 15-24 years and 65 and older. Calls for intentional use were prominent in the young adult years.

The majority of all poisoning exposure calls managed by the SFPCC during 1992 involved substances other than drugs or medications. This, too, is in contrast to the poisoning exposures recorded as the cause for hospitalizations and deaths. Since the SFPCC serves a ten-county area, it was not possible to consider poisoning agents only for those calls that originated in San Francisco. For the entire ten county Bay Area region served, 38% of exposures were for pharmaceuticals, and 62% were for other substances. Of the calls for pharmaceuticals (n=17,808) the three most frequently mentioned drug categories were analgesics (pain killers) (25%), antibiotics and topicals (16%) and over the counter cold and cough preparations (13%). Of the non-drug exposures (n=31,991), the three most commonly mentioned substance categories were household cleaners (14%), plants (11%) and cosmetics/personal care products (10%).

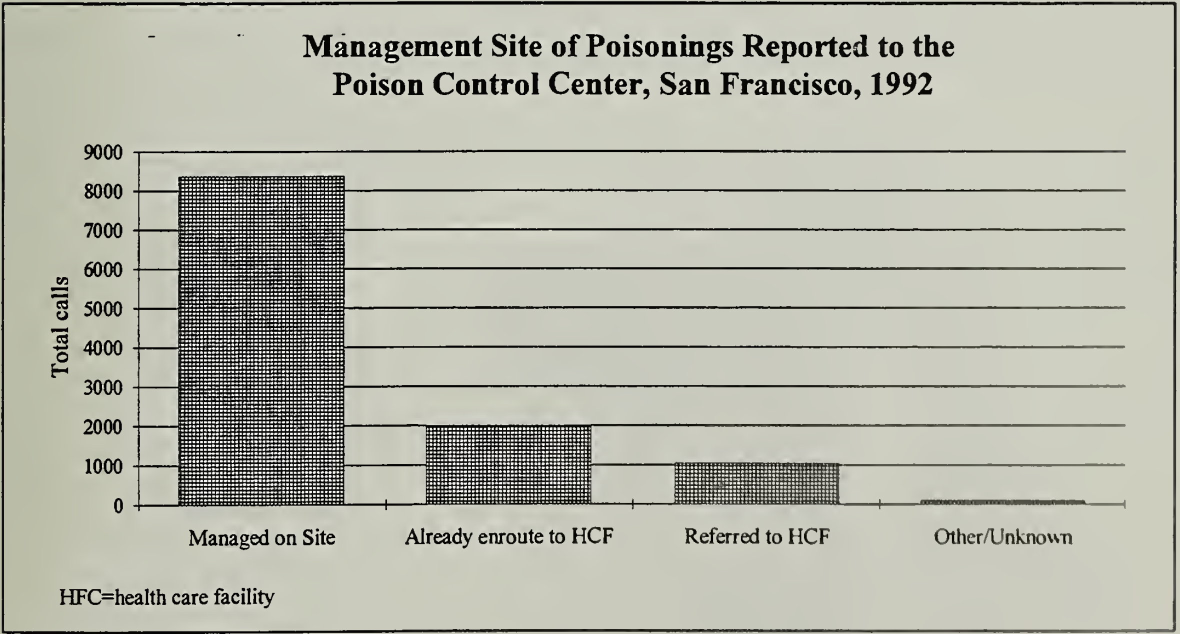
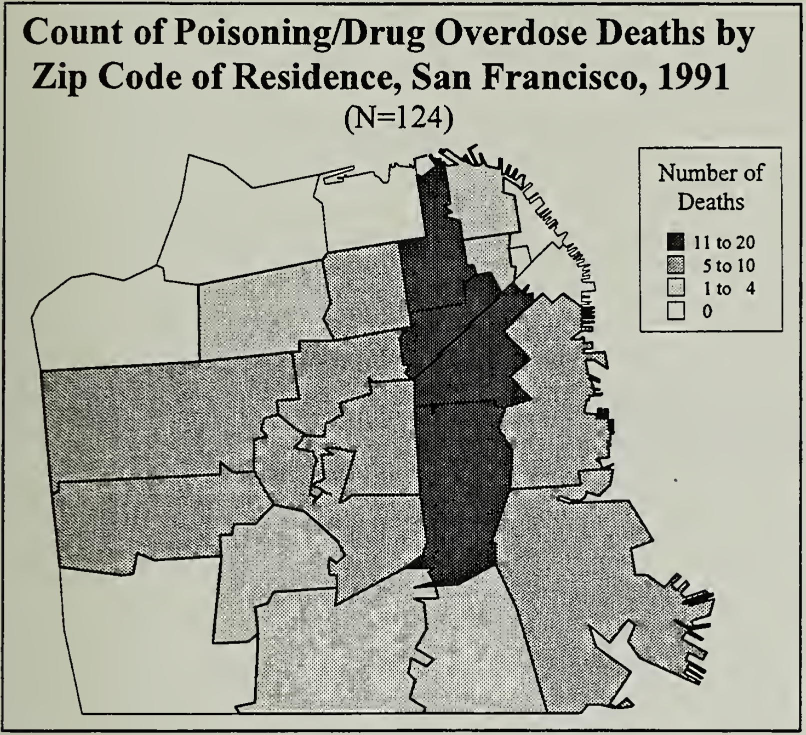


Figure 21.

The majority of poisoning patients who used the consultation services of the Poison Control Center, were managed on site (e.g. private home or residence). In fewer than 10% of the cases, the poisoning patient was referred to a health care facility. In approximately 17% of exposure cases, the patient was already en route; this category reflects the fact that the SFPCC provides consultation to health care providers as well as to individuals in their home.

Geographic Distribution of Poisoning Injuries



Count of Poisoning/Drug Overdose Deaths by Zip Code of Residence, San Francisco, 1991

(N=124)

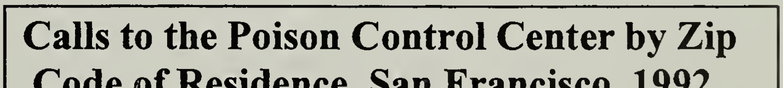
Figure 22.

Distribution of poisoning/drug overdose deaths was concentrated in the downtown area and along the Mission Street corridor.

The geographic distribution of residents who died of a poisoning/drug overdose is very different from the distribution of residents who phoned the poison control center regarding a poisoning exposure. The geographic difference highlights the differences in the characteristics of these two populations. Poisoning/drug overdose deaths are associated with young men aged 25-44 years, street drugs and poverty.

Calls to the poison control center, on the other hand, were distributed much more equally along gender lines, included a disproportionate number of children, and were not necessarily associated with poverty and powerlessness; in fact those who called the SFPCC had to have easy access to a phone and the knowlege of whom to call.

The San Francisco Poison Control Center served many calls from the outer-lying Sunset and Richmond Districts where deaths due to poisoning/drug overdose are relatively rare. At the same time relatively few calls originated from the two zip codes on either side of lower Market Street; zip codes which had high concentrations of poisoning/drug overdose deaths.



Calls to the Poison Control Center by Zip Code of Residence, San Francisco, 1992

(N=4671)

Figure 23.

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* It was not possible to include the Mission District zip code 94110 since that is the default zip code used when the patient's zip is unknown.

Firearm Injuries

Firearms

For the years 1986-1991, firearms were second only to poisoning/drug overdose as the leading cause of injury death in San Francisco, causing 530 deaths during this time period. As is the case with other types of injuries, stark patterns are seen along lines of age, gender, race, and geographic location. Rates of firearm deaths were especially high among young men; among men aged 15-29, firearms accounted for more than one-quarter (27%) of all injury deaths from 1986-1991; among Black men aged 20-24, firearms accounted for more than half (54%) of all injury deaths during this time period.

Among youth aged 15-24 years, homicide was the leading cause of all deaths among females and the second leading cause of death among males, in 1990 (5). Firearms were used in 76% of these homicides. Homicides and the role of firearms in homicides in San Francisco is explored further on pages 63-71.

Deaths

Figure 24 shows the rates of firearm deaths by age and race.

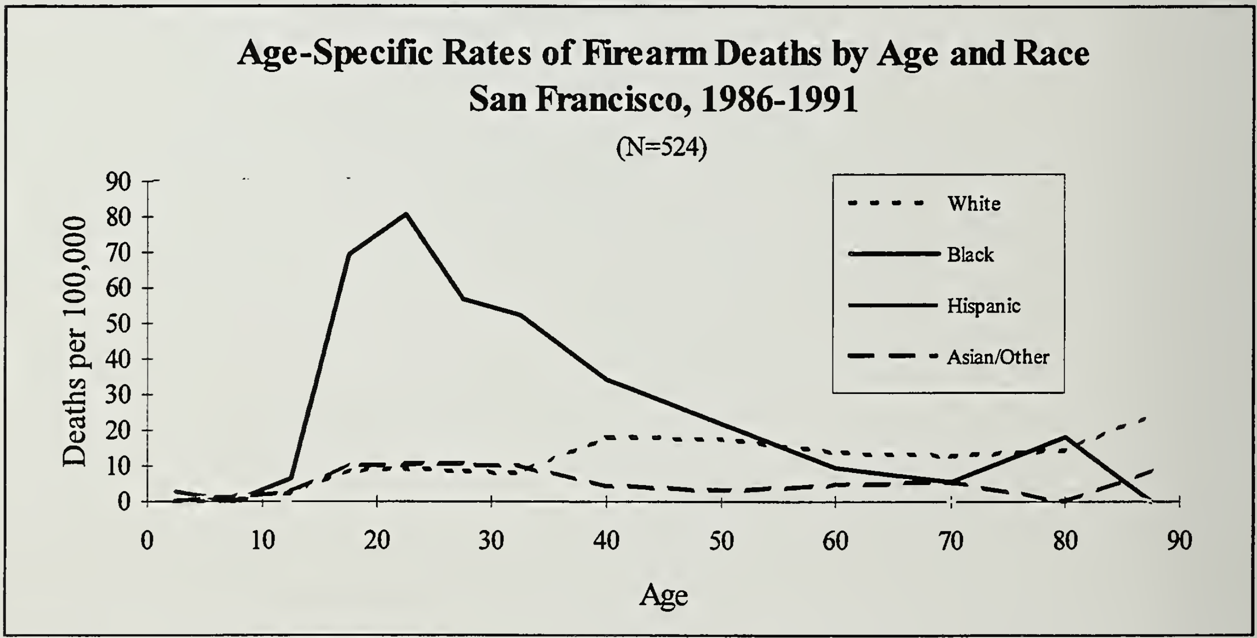


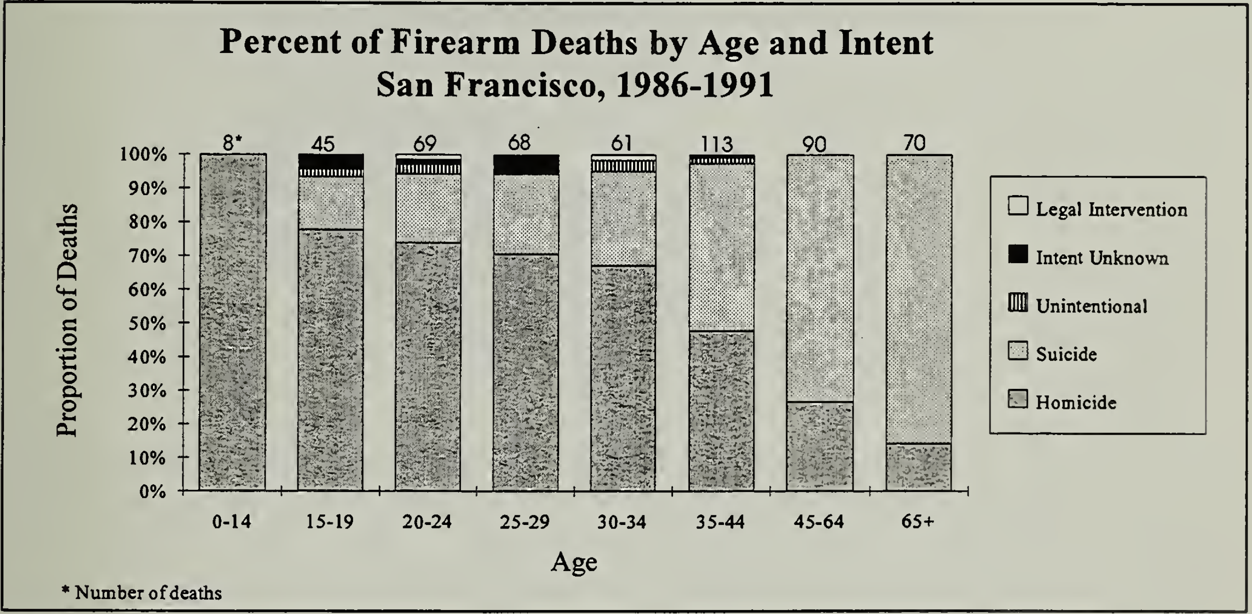
Figure 24.

Rates of death by firearm is highest among Blacks aged 20-24, where this type of death accounts for half of all injury deaths.

The risk of dying from a firearm injury among 20-24 year olds was nine times higher among Blacks than it was for Whites of the same age from 1986-1991. Of the 31 deaths to Blacks in this age group, all were considered homicide including one case of legal intervention.

Among those 65 years and older, the rate of dying from a firearm injury was more than twice as high for Whites as it was for Blacks. While the rate of firearm deaths among Whites aged 65 years and older is only about one-quarter the rate of Blacks aged 20 to 24, it is noteworthy that the rate of firearms deaths among Whites surpasses that of Blacks in older ages. Forty-nine out of 58 (84%) of the firearm deaths of Whites in this age group were men and all of these male deaths were suicides (White females in this age group accounted for 4 homicides).

The intent distribution of firearm deaths at different ages is shown in figure 25.



* Number of deaths

Figure 25.

Homicide is clearly the force behind firearm deaths at younger ages. After about age 35, suicide becomes a more common reason for firearm deaths.

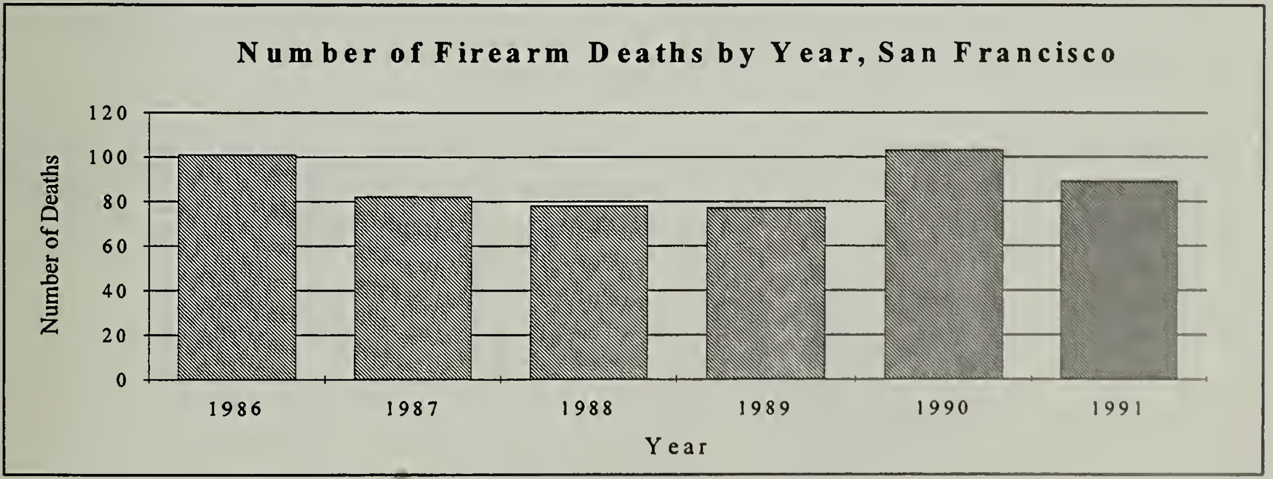


Figure 26.

The number of firearm deaths in San Francisco ranged from about 80 to about 100 for the years 1986 through 1991.

Hospitalizations

Even more dramatic age and race patterns are seen among hospitalizations for firearm injuries. Blacks aged 15-19 have the highest rate of hospitalization-- 789 per 100,000; 6 times the rate of Hispanics and 21 times the rate of Whites in this age group.

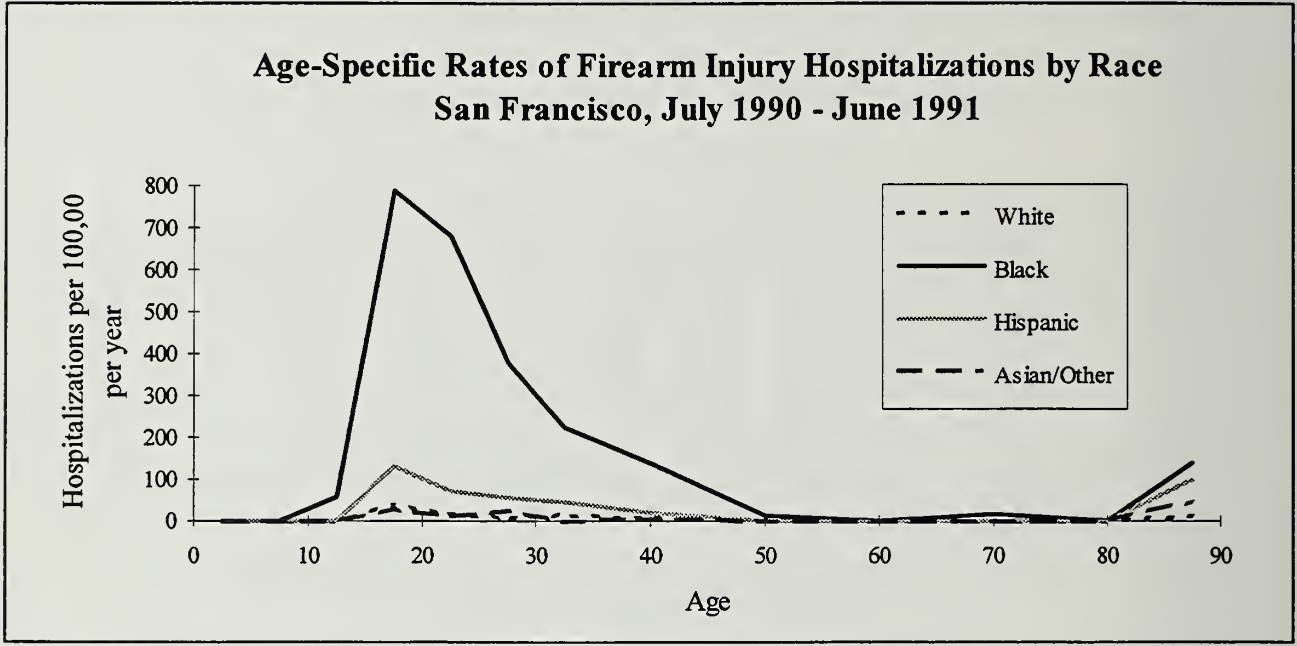
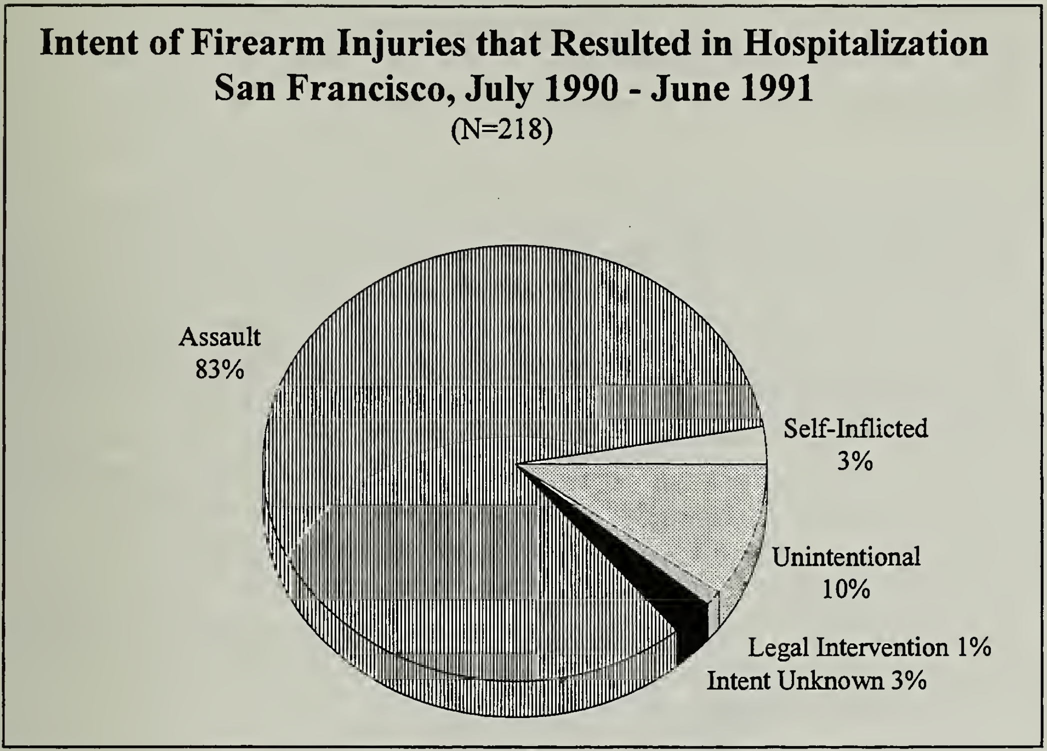


Figure 27.

Overall, firearms accounted for 4% of all injury hospitalizations among San Franciscans from July 1990 through June 1991; among young adults aged 15 to 24, firearms accounted for 16% of injury hospitalizations. Among male youth aged 15 to 19, firearms accounted for over one quarter (26%) of all injury hospitalizations, and among Black youth of this age, firearms accounted for about half (48%) of all injury hospitalizations.

The weapons used in firearm injuries that resulted in hospitalization were classified as "handgun" in 116 cases (53%) and as "other firearm" in 103 cases (47%). This breakdown is important to note only because it highlights the poor documentation of firearm usage in hospitalization records.



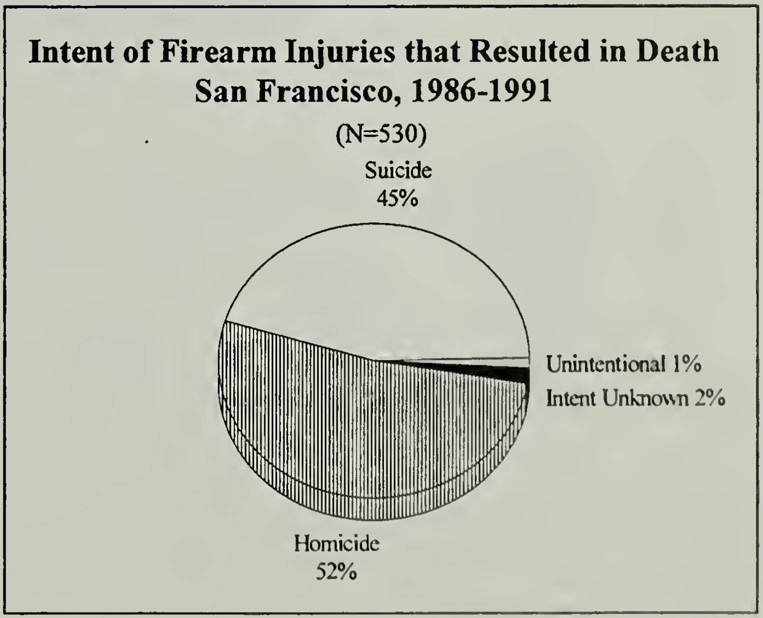
Intent of Firearm Injuries that Resulted in Hospitalization San Francisco, July 1990 - June 1991

(N=218)

Figure 28.

The "intent" behind firearm injuries that resulted in hospitalizations was primarily assaultive. While there were many suicides brought about by firearms (238 over the course of 6 years), there were relatively few hospitalizations from self-inflicted firearm injuries. This difference attests to the lethality of guns; if a person decides to attempt suicide with a gun s/he will probably be successful. Figure 29 shows the intent distribution of firearm deaths for comparison.

The total charges for San Francisco residents who were hospitalized for firearm injuries over the course of one year was $2,413,179, excluding Kaiser hospitals. For more information on these charges, see "Reported Charges of Injury Hospitalizations", page 13.



Intent of Firearm Injuries that Resulted in Death San Francisco, 1986-1991

(N=530)

Figure 29.

San Francisco General Hospital Emergency Department Visits

Virtually all cases of firearm injury which receive emergency treatment at a hospital in San Francisco do so at San Francisco General Hospital (SFGH), due to two reasons. First, San Francisco General Hospital houses the city's only trauma center; therefore ambulances bring all gun-related injuries there. Second, since it is a public hospital and centrally located, General Hospital tends to get a fair number of gun shot patients who walk to, or arrive at the Emergency Department (ED) in private vehicles.

In 1992 there were 493 visits to San Francisco General's ED for firearm injuries; that was an average of more than one per day. This group of patients was identified by searching the Emergency Department database by E code and key words such as "GSW" or "bullet". In the final set of 493 patient records, 394 (80%) had an E code for firearm injury, and the rest were included on the basis of such key words. Since there is no consistent, universal way to identify patients with a gun shot wound in this database, the total of 493 cases should perhaps be read more accurately as "at least 493 cases".

Monthly totals for ED visits for firearm injuries ranged from 30 to 69 with no clear trends or seasonal patterns. When considered by hour of day, the number of visits tended to increase in the late afternoon and continue through the night. The fewest numbers of patients were brought to the ED from 7 AM to 1 PM.

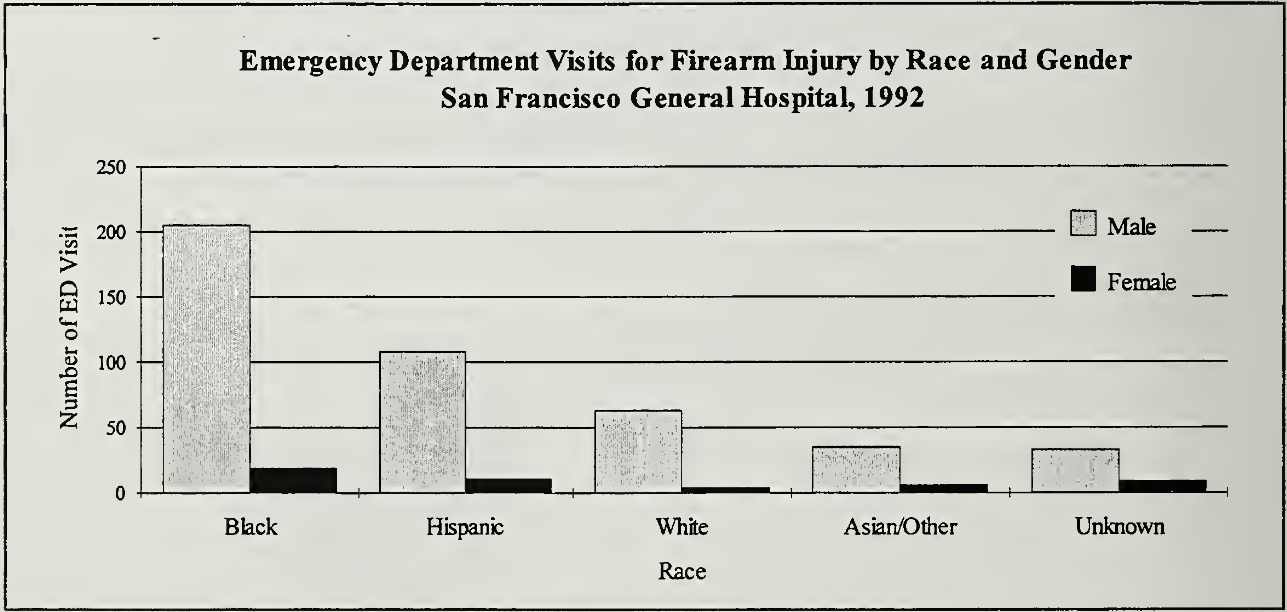

Emergency Department Visits for Firearm Injury by Race and Gender
San Francisco General Hospital, 1992

Figure 30.

In 1992, 42% of Emergency Department visits for firearm injuries were of Black men; in 1992, Black men comprised 5% of the population in San Francisco. Twenty-two percent of ED visits for firearm injuries were of Hispanic men; Hispanic men comprised 8% of the population during that time.

The same predominence of Black males is seen with Emergency Department visits as was seen with firearm deaths and hospitalizations. Since San Francisco General Hospital receives virtually all gun shot cases, the bias in considering only one public hospital is minimal.

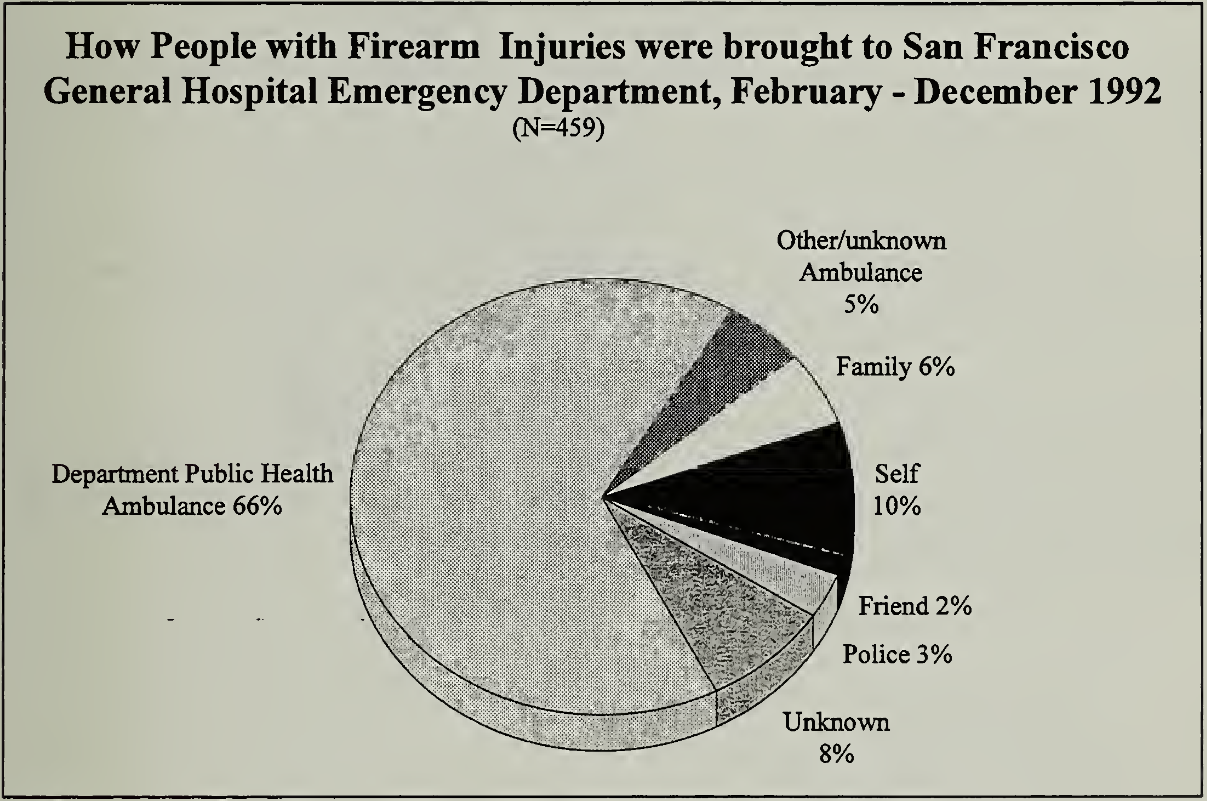


Figure 31.

Seventy-one percent of gun shot patients were brought to the Emergency Department by ambulance, 3% by the police, and the remainder were brought by friends, self, or unknown. (Since these data are not reliable for the month of January, only February through December 1992 are considered).

Kaiser was the single largest payor of San Francisco General Hospital Emergency Department visits for firearm injuries; they were billed for fully one-third of all visits. MediCal was the next most frequently billed at 26% of all visits, and the patient was billed 22% of the time. Whether and how much a patient is billed does not usually equate with how much revenue is collected. While this is a difficult question to address, it is generally accepted that San Francisco General Hospital receives a certain fraction of the charges it bills to individual patients.

Gender Differences

An extreme difference in firearm injuries is seen along gender lines as well as age and race.

Table 2. Gender Differences in Firearm Injuries, San Francisco

Gender	Deaths 1991		Hospitalizations 7/1990-6/1991		San Francisco General Hospital Emergency Department Visits 1991	
Male	75	84%	198	91%	444	90%
Female	14	16%	20	9%	49	10%
Total	89	100%	218	100%	493	100%

Overall, men accounted for 84% of deaths, 91% of hospitalizations, and 90% of San Francisco General Hospital Emergency Department visits, for firearm injuries.

While more men than women tend to get injured in general, this difference is especially pronounced with firearm injuries. Overall, male San Francisco residents accounted for 73% of injury deaths in 1991 and 60% of injury hospitalizations. This can be contrasted with 84% of firearm deaths in 1991 and 91% of firearm hospitalizations from July 1990 through June 1991.

Geographic Distribution of Firearm Injuries

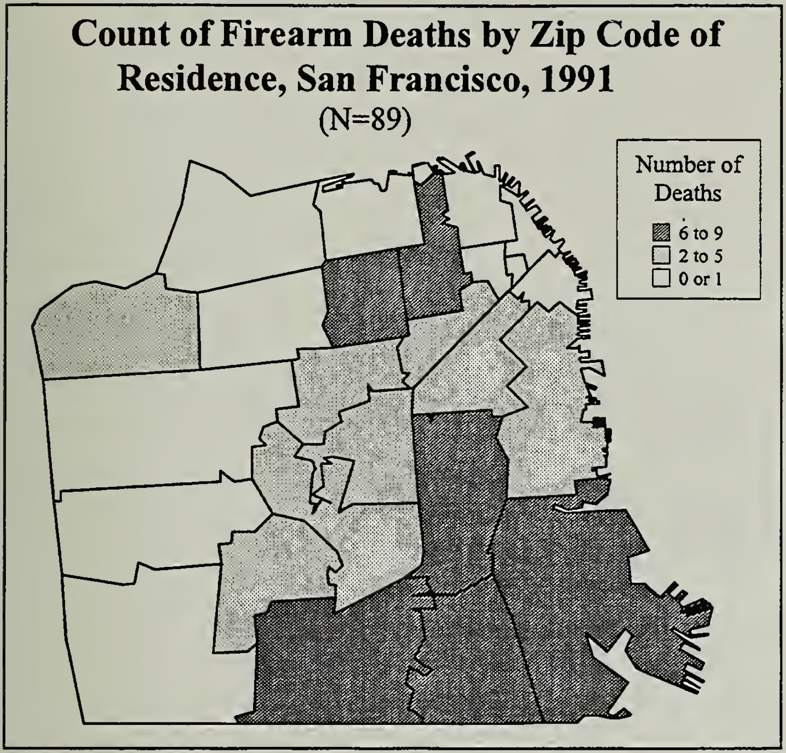

Count of Firearm Deaths by Zip Code of Residence, San Francisco, 1991
(N=89)

Figure 32.

Figure 32 shows the residence zip codes of San Franciscans who died of firearm injuries in 1991. Neighborhoods in the eastern and southern part of the city tended to have more gun shot deaths than other areas.

Figure 33 shows the location of 9-1-1 responses for firearm injuries in 1991. To some extent, the 9-1-1 response distribution corroborates the resident distribution indicating that the neighborhoods in which residents died of gun shot wounds tended to be the same areas that hosted the shootings. The neighborhoods Bayview Hunters Point, Sunnydale, and lower Mission each were the site of several shootings and several resident deaths; the four zip codes that cover these areas had at least 25 9-1-1 calls each, and were home to at least 6 people who died.

Areas where gun shot patients lived and where 9-1-1 responses occured, were not always the same, however. The other two zip codes in which 5 or more residents died from a firearm injury, (north of the Tenderloin and Western Addition), each had relatively few incidents; 8 and 10 respectively. At the same time, the zip codes on either side of lower Market Street had many incidents and relatively few resident deaths; each of these two tracts had 25 or more incidents and 4 deaths.

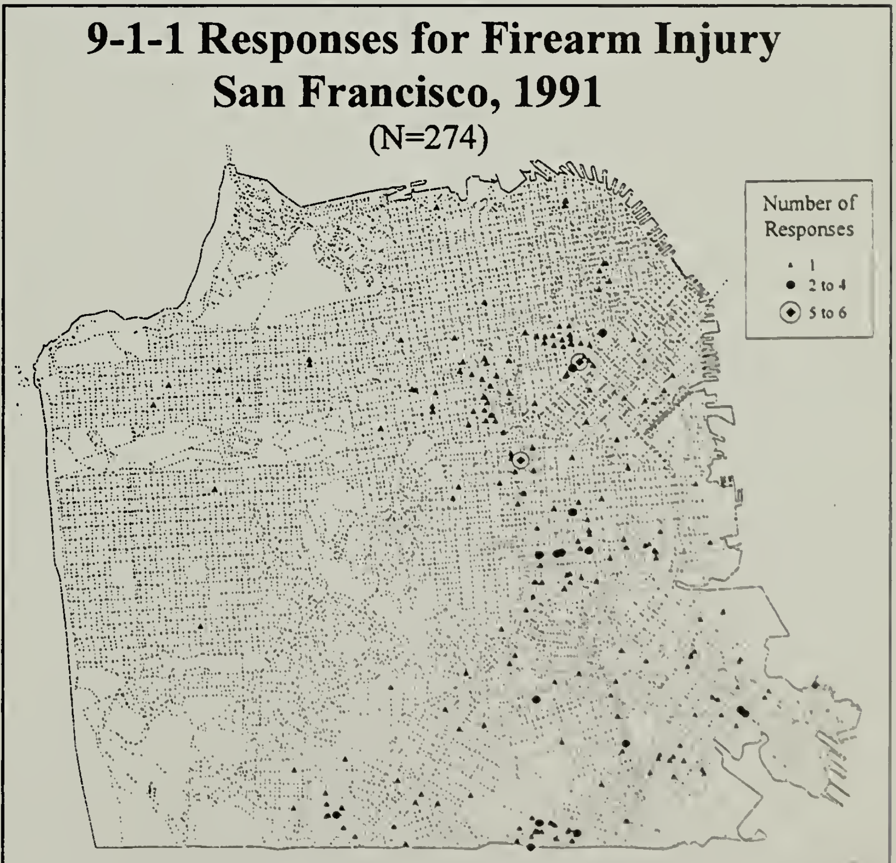

9-1-1 Responses for Firearm Injury San Francisco, 1991
(N=274)

Figure 33.

Injuries Caused by Motor Vehicles

Motor Vehicles

Motor vehicles account for a significant portion of all injuries. Nationally motor vehicle crashes are the leading cause of injury death, and the leading cause of all deaths among those 1 to 34 years old (2). Since San Francisco is a dense urban environment, motor vehicle collisions account for a relatively smaller portion of injuries vis-a-vis other causes, than they do nationally. However, for the same reason, pedestrian-auto injuries account for a relatively large share of these motor vehicle-related injuries and are of special concern.

The category "motor vehicle" injuries can include those that occur both in and out of traffic situations ("traffic" in this case refers to public roadways). Figure 34 includes injuries sustained both in and out of traffic. However, for figures 35 through 38, only injuries resulting from traffic situations are considered, in order to facilitate comparisons with national data. The injured person could be the driver, a passenger, motorcyclist, pedestrian or bicyclist, as long as the injury resulted from a collision with a motor vehicle in traffic.

Deaths and Hospitalizations

By Age

Eighty-six San Francisco residents died as a result of collisions involving motor vehicles in 1991; 373 residents were hospitalized from July 1990 through June 1991 for injuries from motor vehicle crashes. Counts of hospitalizations and deaths due to motor vehicle collisions for San Francisco residents are shown below.

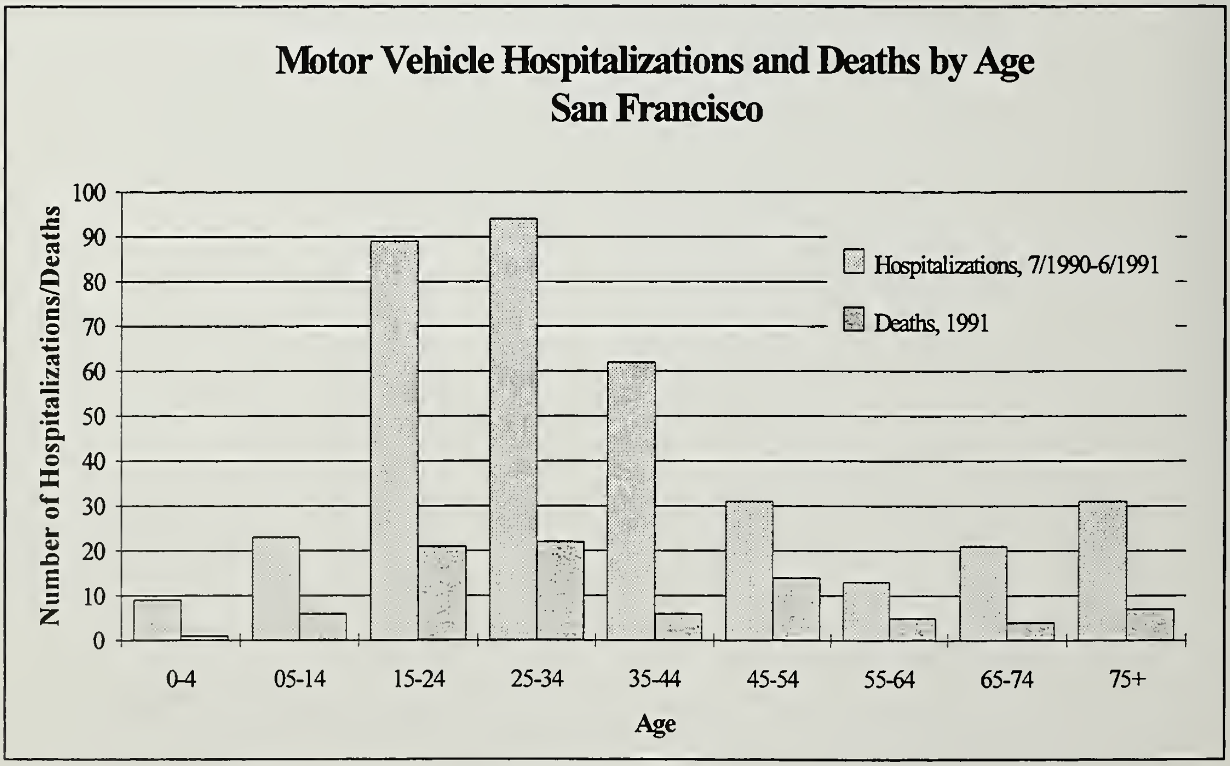


Figure 34.

The number of hospitalizations and deaths due to motor vehicle crashes is highest among young adults. The numbers begin to rise again among senior citizens.

Males outnumbered females among both deaths and hospitalizations. More than two thirds of motor vehicle-related deaths and hospitalizations were men (not shown). The greatest discrepancies between male and female mortality are in the age groups 15-34 years where males accounted for more than three quarters of deaths due to collisions with motor vehicles in 1986-1991.

By Cause

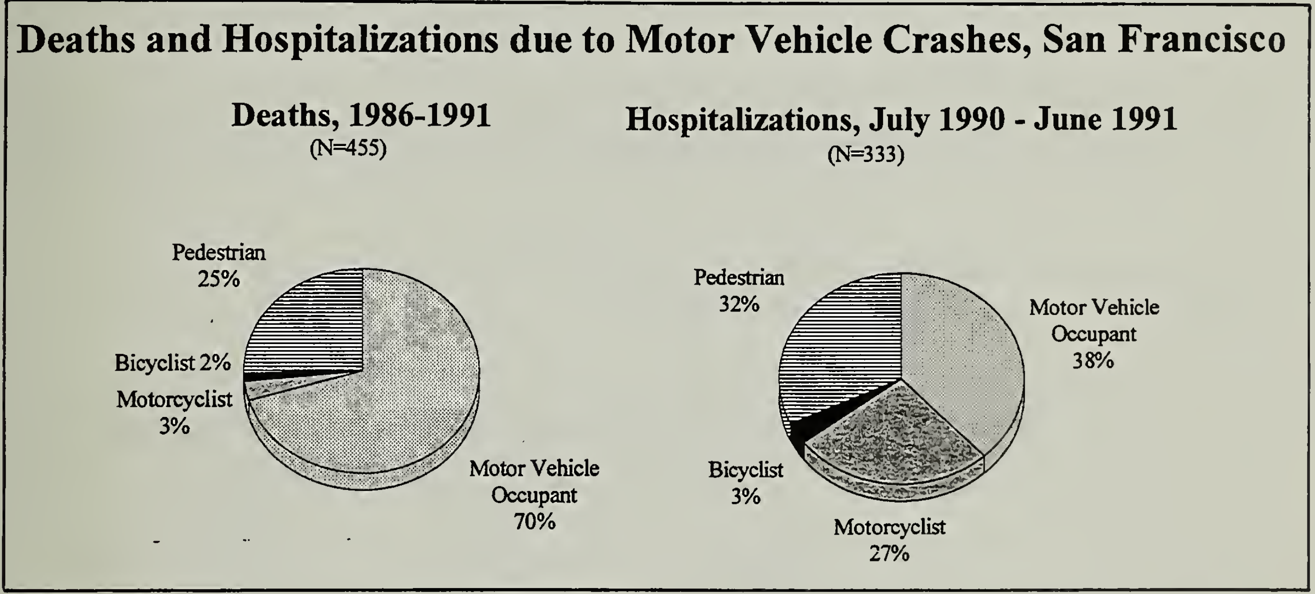


Figure 35.

In San Francisco, pedestrians accounted for 25% of motor vehicle related deaths from 1986-1991; nationally, they accounted for 15% of this type of fatality from 1986-1988.

While motor vehicle occupants (drivers and passengers) comprise the single largest category within motor vehicle injury deaths, pedestrians account for nearly as many hospitalizations as do occupants. Nationally, pedestrians accounted for only 15% of motor-vehicle-related deaths in 1986-1988, as compared to San Francisco's 25% (2).

Motorcyclists accounted for a significant share of motor vehicle hospitalizations (27%, representing 89 hospitalizations), but only for a small proportion of motor vehicle deaths (3%, representing 14 deaths).

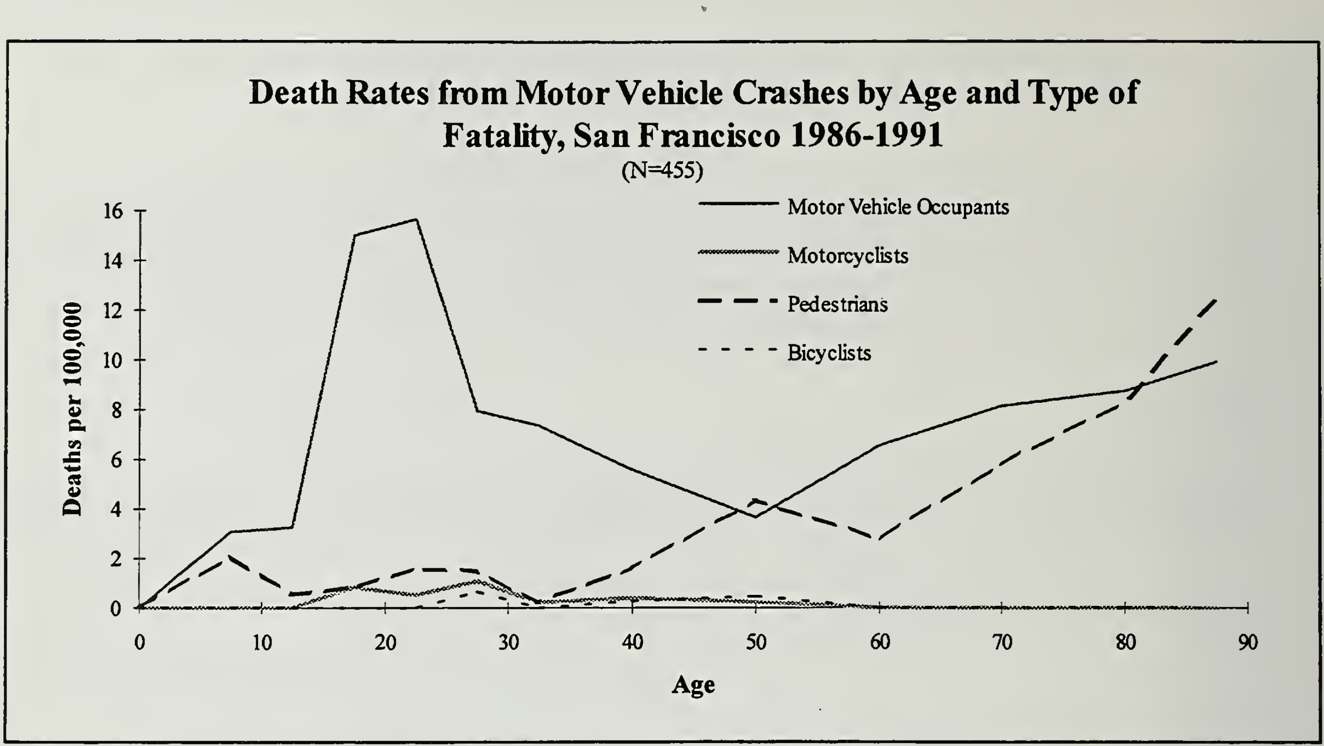


Figure 36.

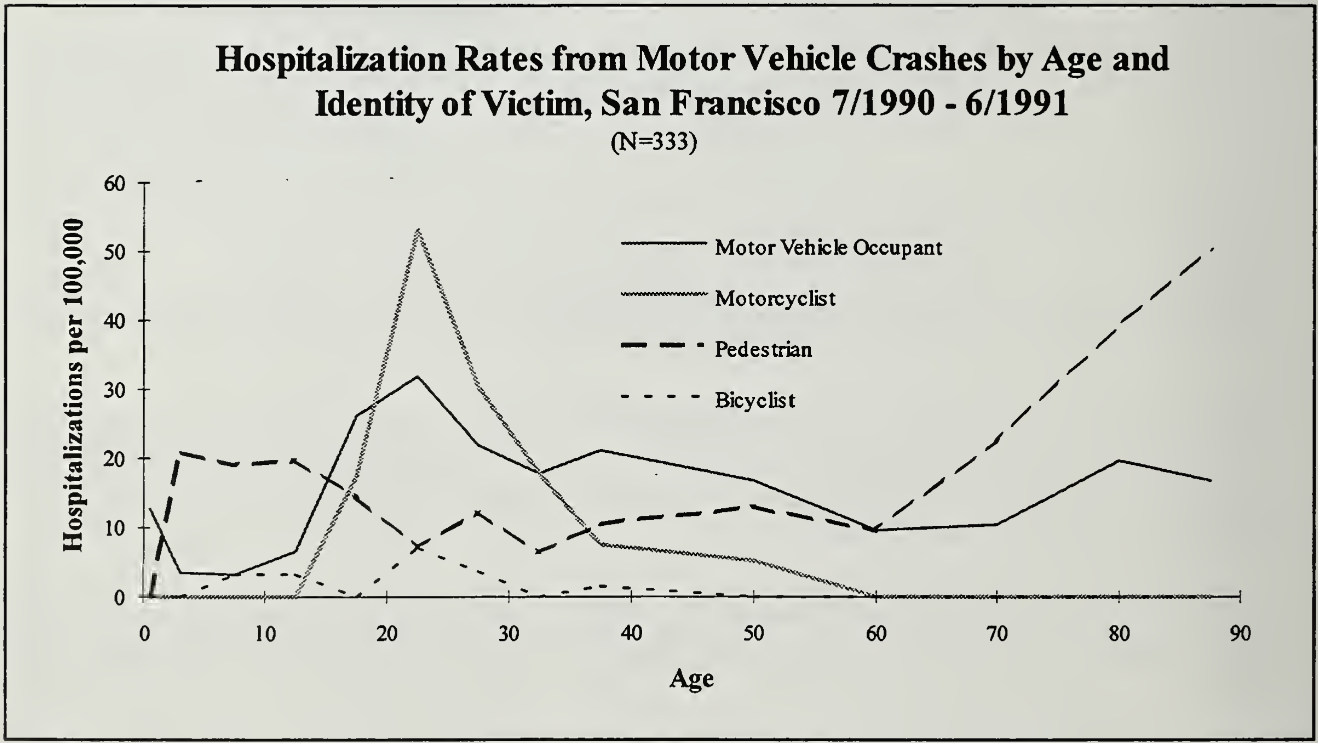


Figure 37.

When displayed by age and type of injury it becomes clear that different activities carry higher risk at different ages. Motor vehicle occupant death rates peak in the 20-24 year range. As with the overall motor vehicle category, these deaths are predominantly male (75%). Occupant deaths rise again after age 50. Pedestrian deaths on the other hand are highest beginning at about age 60 where they account for an increasing share of all deaths. Pedestrian injuries also differ from motor vehicle occupant injuries along gender lines. While females accounted for 29% of non-pedestrian motor vehicle deaths, they comprised 41% of pedestrian deaths. Among those over 65 years, females made up just under half of pedestrian deaths.

Hospitalization rates, like death rates, show that residents in the 20 to 24 year range are at greatest risk for motor vehicle occupant injuries. This age group also has the highest rate of motorcycle injuries-- a surprisingly high rate given the relatively few motorcyclist fatalities. Hospitalization rates like death rates also show a dramatic increase in pedestrian injuries among those over 60 years. Children are also at particular risk for pedestrian injuries; while among children who died due to a motor vehicle collision more were occupants, among those who were hospitalized for a motor vehicle related injury, more were pedestrians. Bicyclists are at greatest risk for hospitalization in the 20 to 30 year age range.

Charges for hospitalization due to motor vehicle collisions totaled $4,481,661 for San Franciscans from July 1990 through June 1991 excluding Kaiser hospitals. These charges are explained in more detail under "Reported Charges of Injury Hospitalizations", page 13.

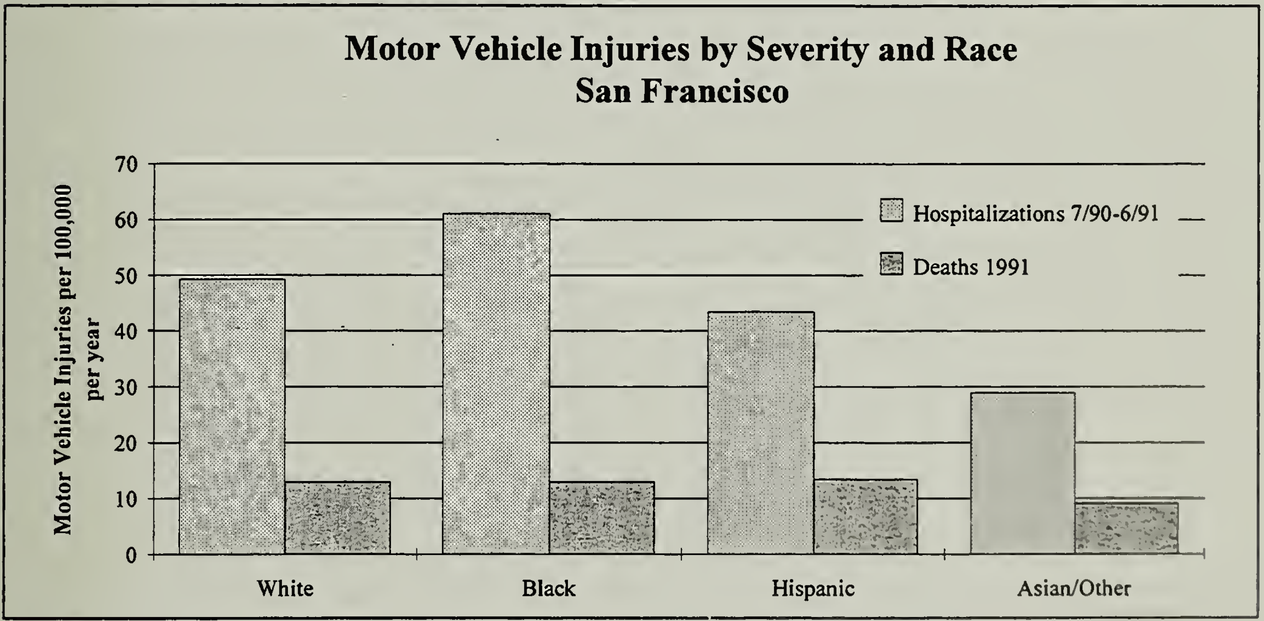


Figure 38.

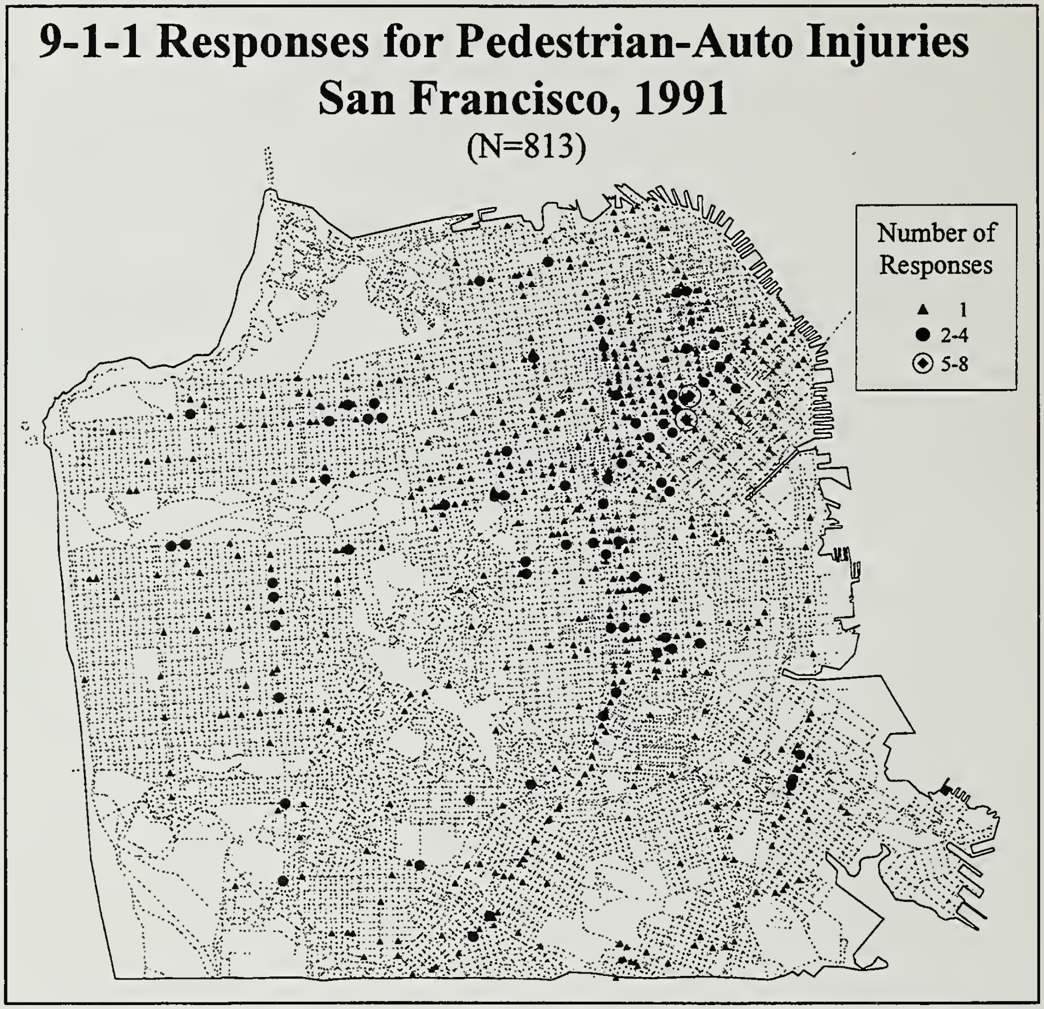
Overall, for every one motor vehicle death in San Francisco, there were 4 hospitalizations for a motor vehicle-related injury.

African Americans had the highest rates of motor vehicle injuries at both levels of severity; those classified as "Asian or Other" had the lowest rates for motor vehicle-related injuries.

Emergency Department Visits

As mentioned on page 37, for every one motor vehicle-related death in San Francisco there were 4 hospitalizations for a motor vehicle related injury; to this can be added that there were 25 visits to San Francisco General Hospital Emergency Department (ED). Three thousand fifteen patients were seen at San Francisco General ED for a motor-vehicle related injury in 1992. Males outnumbered females by a margin of 3 to 2. Activity was recorded on 75% ED records (N=2258). These records revealed that nearly two-thirds of patients were injured as motor vehicle occupants (drivers or passengers), 20% were pedestrians, 11% were on motorcycles and 5% were pedal cyclists. Black and Hispanic patients were disproportionately represented in the emergency department for motor vehicle related injuries. Caution must be used in interpreting patient demographics, however, since San Francisco General was the only hospital emergency department considered, and this is San Francisco's only public hospital. Hence, high numbers of emergency department visits by Blacks and Hispanics may more accurately reflect hospital utilization patterns than motor vehicle crash rates.

Geographic Distribution of Motor Vehicle Related Injuries



9-1-1 Responses for Pedestrian-Auto Injuries
San Francisco, 1991
(N=813)

Figure 39.

Pedestrian Injuries

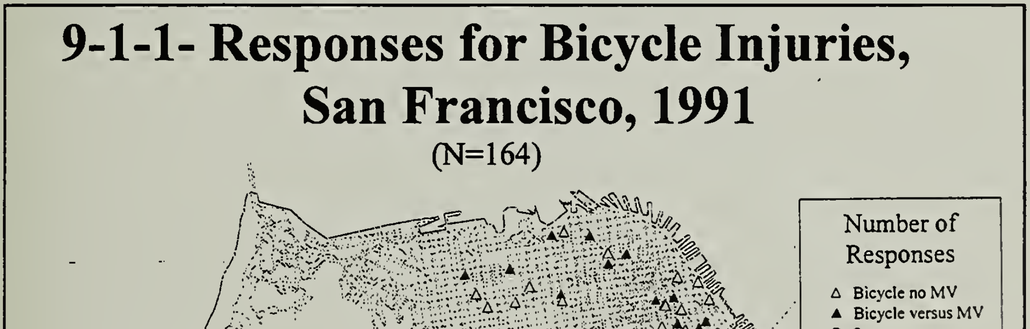
There were 813 calls to 9-1-1 which resulted in emergency response for pedestrian injuries due to collisions with autos in 1991 (San Francisco resident only). Pedestrian injuries were heavily concentrated in the downtown area of San Francisco and along heavily trafficked corridors. Market, Mission, and 3rd Streets, Geary Boulevard and 19th Avenue each were the site of several pedestrian injuries. The most concentrated locale for pedestrian injuries for the entire city was Market Street between 5th and 7th Streets. In 1991, there were five 9-1-1 calls for pedestrians at the corner of 5th and Market streets alone, 4 calls each for the corners of 6th and Market and 7th and Market, and 8 calls one block away at 6th and Mission. This area is very concentrated with both motor and foot traffic. Its situation downtown in close proximity to Union Square, the cable car turn-around, and the tourist information center increase tourist and taxi traffic. The area is also near the beginning of the line for most municipal transportation, both above and below ground, and at many stops the boarding platform is on an island with motor traffic traveling on both sides. Market Street runs at a diagonal and often there are multiple corners at odd angles at a single intersection. Hence there is an atmosphere of chaos and the actions of pedestrians are not always predictable.

Other corridors with many pedestrian injuries tended to be heavily trafficked thoroughfares where motor traffic travels at faster speeds than on other nearby routes. Such corridors also tended to be business districts and major public transportation routes, both of which increase foot traffic.

Bicycle Injuries

Bicycle injuries were heavily concentrated in the downtown area and at the intersections of Market, Mission and VanNess Ave. Paramedics who attend to these bicycle injuries noted anecdotally that many of the injuries in the downtown area are to bicycle messengers. Golden Gate Park was also the site of many bicycle injuries; this is a popular area for recreational riding and bicycles share roads with automobiles.

Included on this map are bicycle injuries regardless of whether the event leading to injury involved an auto. Of the 164 injuries plotted here, 122 involved an automobile. Shaded triangles and open triangles distinguish sites of a single collision by whether a motor vehicle was involved. Where more than one collision occurred at the same site, symbols for multiple collisions were used regardless of auto involvement.



9-1-1- Responses for Bicycle Injuries, San Francisco, 1991

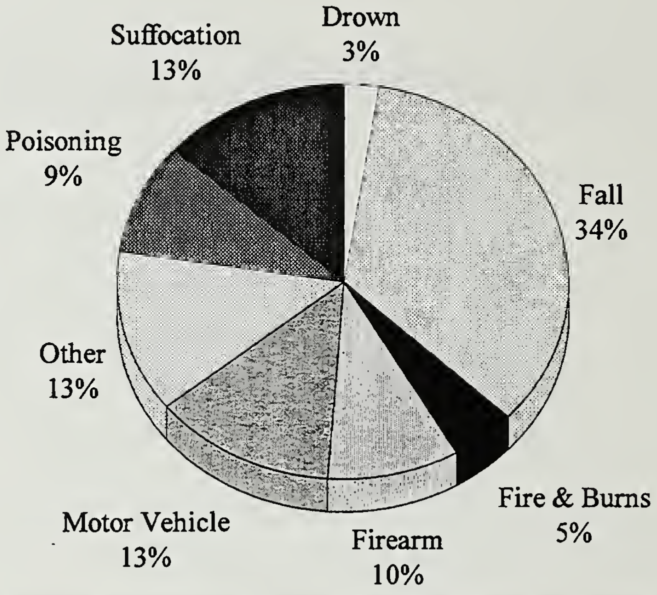
(N=164)

Figure 40.

Injuries Caused by Falls

Falls

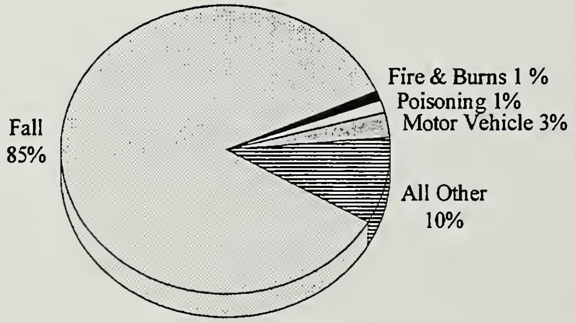
As is the case with other types of injuries, the population affected by falls varies greatly depending on whether the outcome is death, hospitalization, or an emergency department visit. Generally speaking, falls are mostly a problem among the elderly.



Cause of Injury Death Among Those 65 Years and Older
San Francisco, 1986-1991
(N=800)

Figure 41.

Falls are mostly a problem among the elderly where this type of injury accounts for 85% of injury hospitalizations and 34% of injury deaths.



Causes of Injury Hospitalization Among Those 65 Years and Older
San Francisco, 7/1990 - 6/1991
(N=1596)

Figure 42.

Deaths

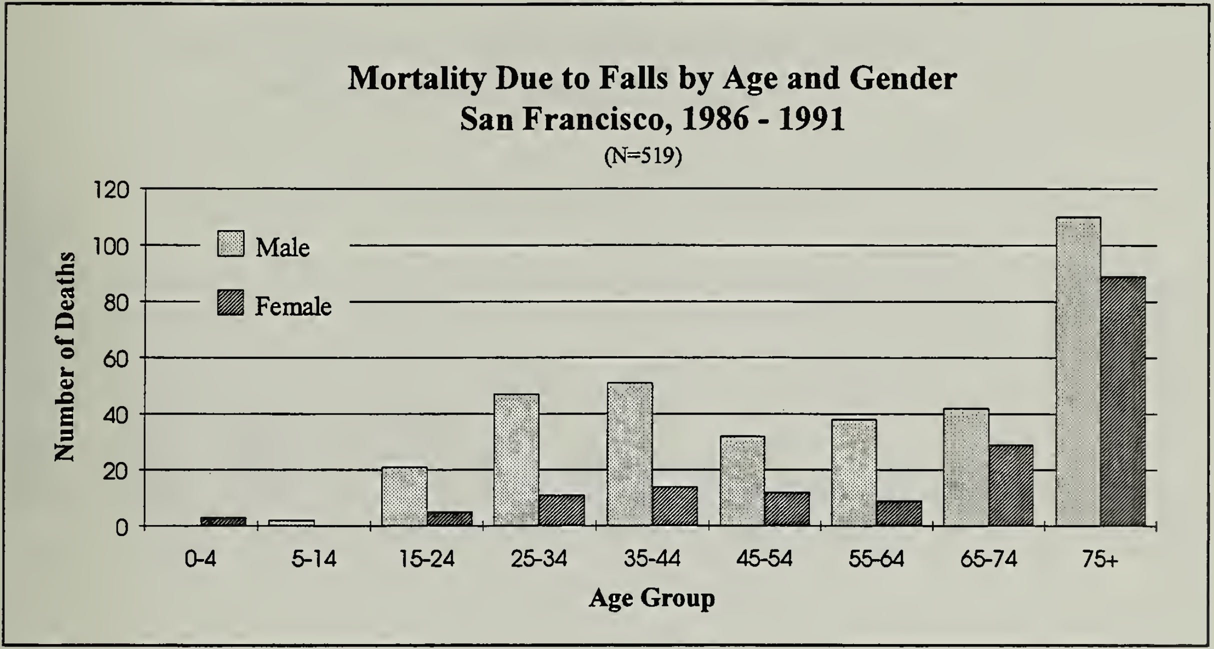


Figure 43.

Figure 43 shows the age distribution of San Franciscans who died as a result of falls from 1986 through 1991. This graph shows counts of deaths, not rates, which take into account the number of people alive in each age group. Since there are a lot fewer 75 year olds than 35 year olds in San Francisco, the risk of dying from a fall among the elderly is even higher than this figure suggests.

Males outnumbered females at every age except the very young. There were a considerable number of deaths due to falls among males aged 25 to 44. Of the 98 men in this age group who died of falls, 41 (42%) were considered suicide and an additional 4 were ruled of unknown intent. Of the unintentional falls for men in this age group, we suspect that some are occupational.

Hospitalizations

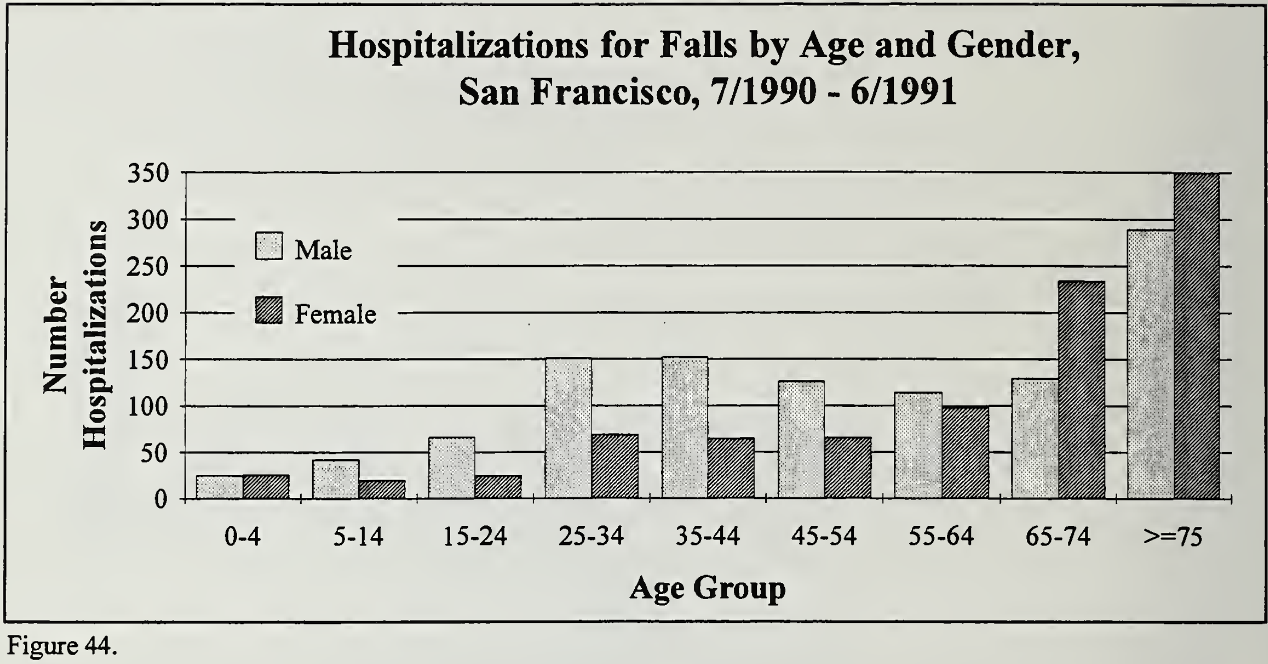


Figure 44.

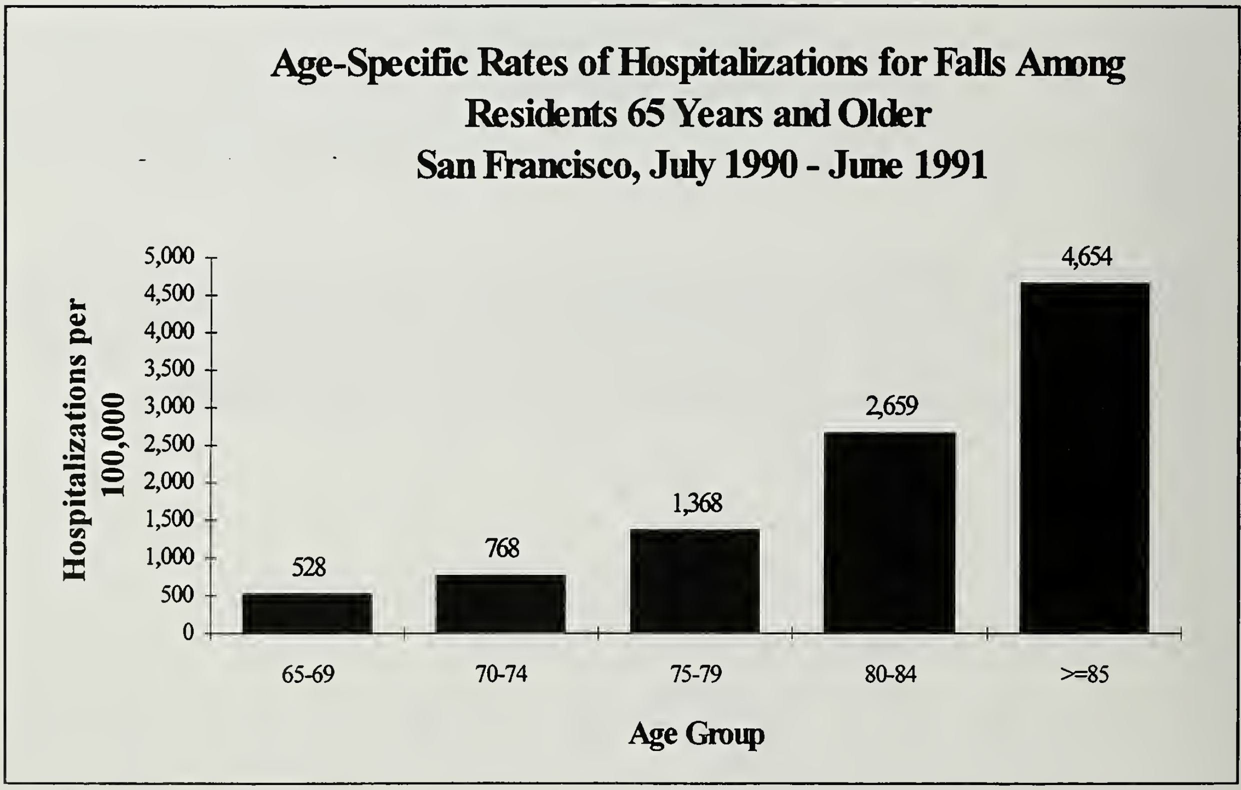


Figure 45.

The age and gender distribution of hospitalizations for falls highlights again that falls are a special problem among the old and very old. Males outnumbered females up to about age 64 after which more women were hospitalized than men. Of all San Franciscans who were hospitalized for falls, 720 (27%) were for falls from one level to another; 821 (31%) were for falls on the same level, and 1101 (42%) were not specified. Falls from one level to another were more prominent among infants and children under 5 years. Among this group, 82% of falls were from one level to another (notably off of stairs, chairs and beds), 10% were falls on the same level and 8% were recorded as "fall, unspecified". Among elderly 65 years and older, 49% of hospitalizations for falls were recorded as "fall, unspecified". For records which were coded more specifically (n=808), 61% were falls on the same level. More accurate coding of falls would significantly help injury prevention efforts, especially among the elderly age group.

The vast majority of falls were unintentional; of all hospitalizations for falls over the course of the year, only three were considered self-inflicted and 5 resulted from an assaultive act. This is in contrast to deaths where 23% of all fall deaths were ruled suicidal. This difference attests to the potential lethality of falls; if an individual intends to commit suicide by jumping from a high place, s/he will probably be successful.

The total hospital charges for falls for San Franciscans from July 1990 through June 1991 was $34,189,265 excluding Kaiser hospitals. Further detail on "total hospital charges" is included under "Reported Charges of Injury Hospitalizations", page 13.

Emergency Department Visits

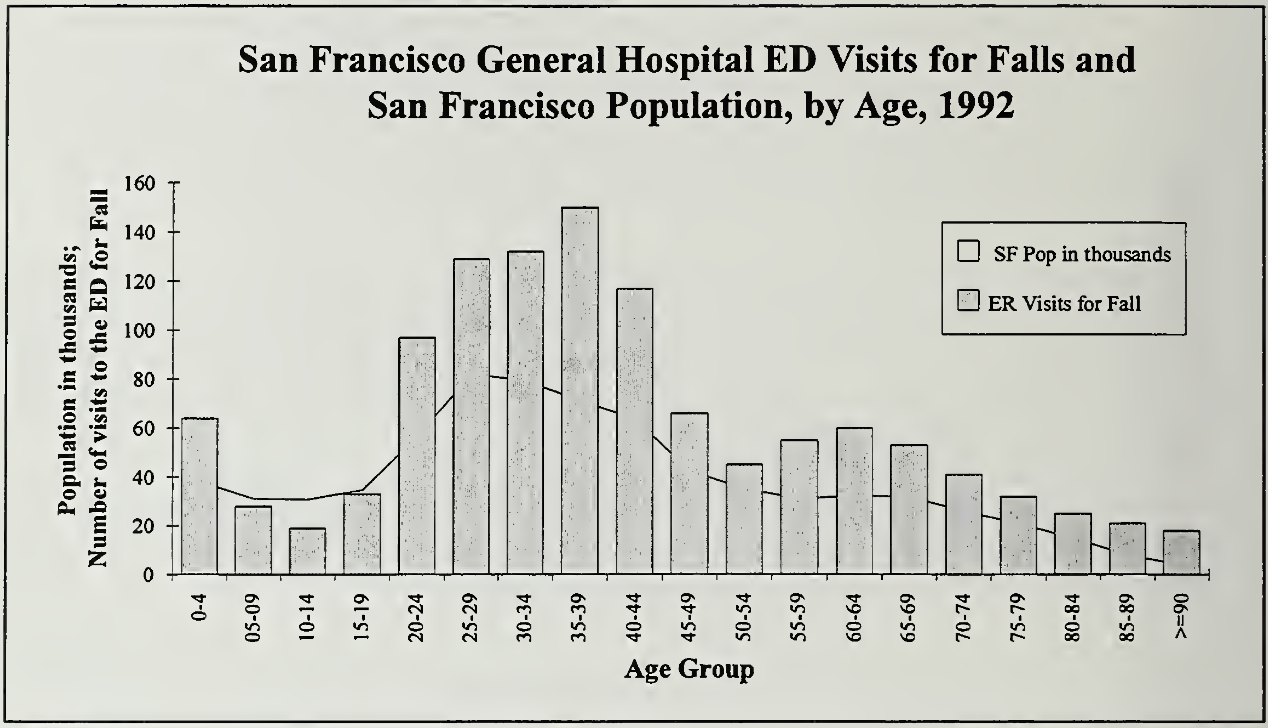


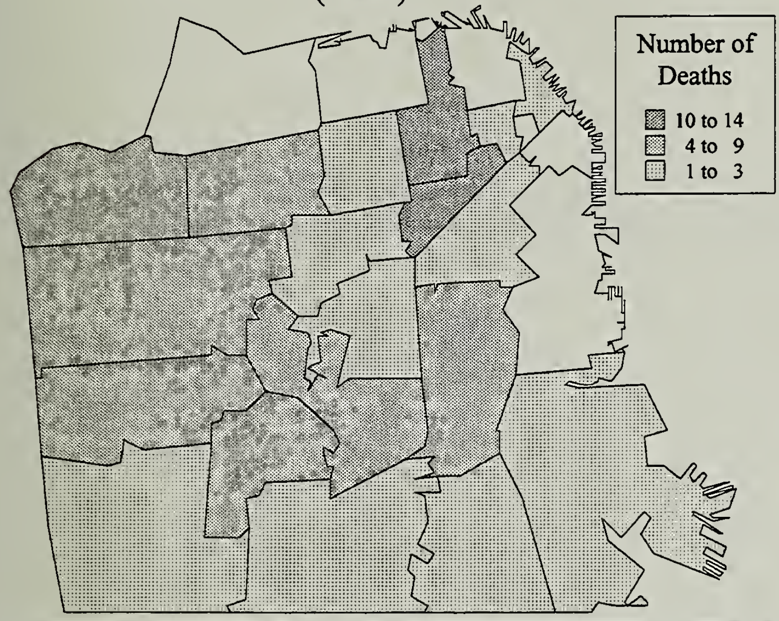
Figure 46.

San Francisco General Hospital Emergency Department visits for falls reveal three major age groups; children up to four years, young adults 20 to 44 years, and the elderly. Among children who visited the emergency department for falls, boys were seen twice as often as girls, and Black and Hispanic children more often than White or Asian children, although it is impossible to tell how much this difference may be due to public hospital utilization by ethnic groups, and how much due to the number of fall injuries. It should be noted that falls are sometimes given as the cause of intentionally inflicted injuries in children (14).

Among those aged 20 to 44 who visited the ED for falls, 459 (73%) were men. Thirteen percent of patients brought to the Emergency Department for falls had alcohol involvement; 11.5% were homeless. It is unknown how many falls result from domestic violence. Among those 55 years and older brought to the Emergency Department for falls, 5% were homeless and 13% had alcohol involvement.

Approximately half of the patients seen in the Emergency Department for falls were brought by ambulance. Fractures, contusions, open wounds, and muskulo-skeletal injuries were the four primary types of injuries listed.

Geographic Distribution of Falls



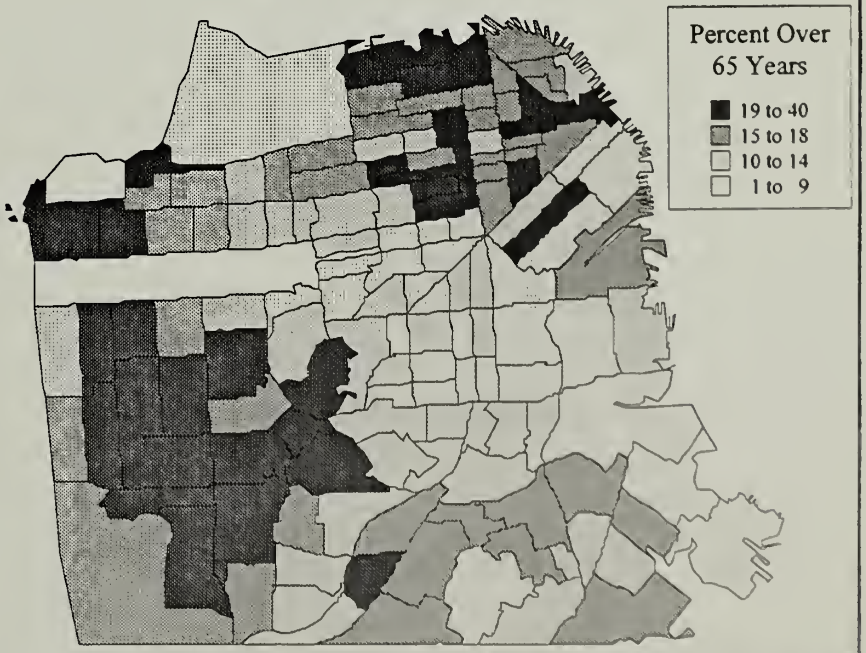
Count of Deaths due to Falls by Zip Code of Residence, San Francisco, 1991

(N=79)

Figure 47.

The greatest number of falls resulting in death occurred in the Tenderloin and north of Market area. The next most concentrated region was the western part of the city ---Sunset and Richmond neighborhoods, and the Mission. This geographic distribution is unlike those seen with poisoning and firearm deaths in which there were proportionally more deaths in the South of Market and southern parts of the city.

Not surprisingly, the geographic distribution of deaths due to falls mimics the distribution of elderly in San Francisco, as measured by the percent of population over 65 years. Further exploration of the distribution of falls could include location of the fall (in addition to location of residence), as well as environmental factors and surrounding circumstances.



Geographic Distribution of Elderly Population by Census Tract of Residence San Francisco, 1990

Figure 48.

Homicide/Assault

Homicide/Assault

From 1986 through 1991, homicides were responsible for 556 deaths in San Francisco. Homicide was the leading cause of death among young women aged 15 to 24 in 1990, and the second leading cause of death among young men of the same age (5). (Unintentional injuries grouped together were the first leading cause of death among young men; homicides exceeded deaths due to motor vehicles and drug overdoses when considered separately.)

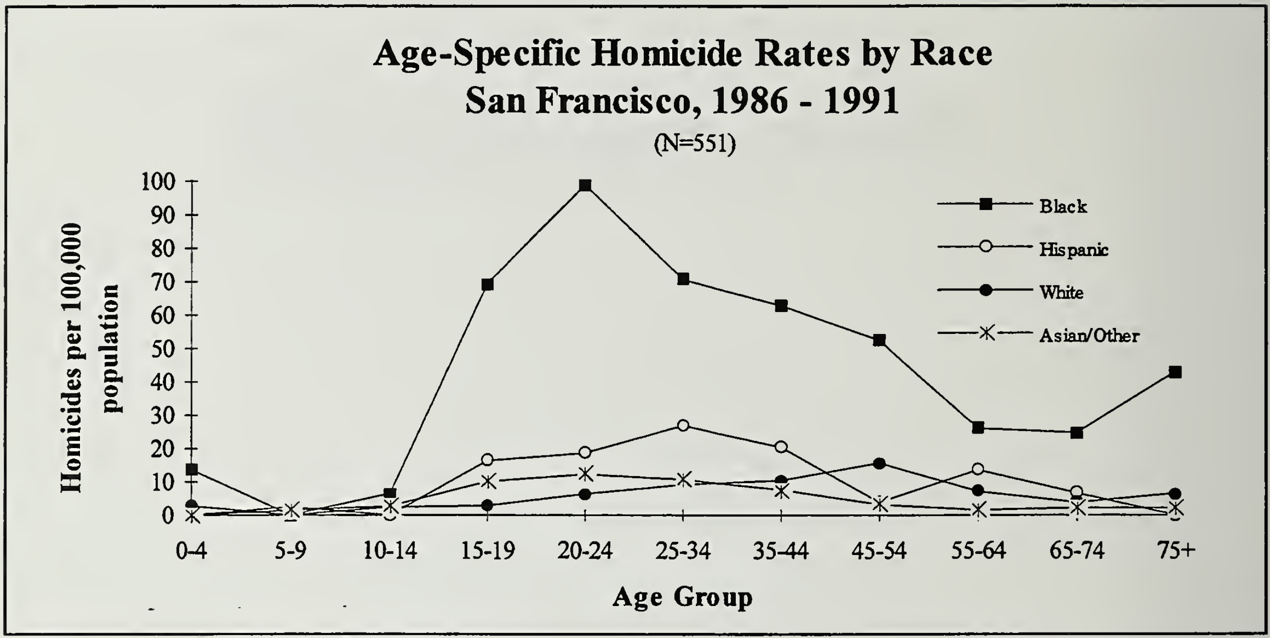

Age-Specific Homicide Rates by Race
San Francisco, 1986 - 1991
(N=551)

Figure 49.

As with other types of injuries, homicides show strong patterns according to age and race. It is important to note that controlling for poverty and extreme poverty often eliminates patterns that manifest in terms of race (10). It is difficult to tease out the independent effects of poverty, culture and race but we suspect that poverty is one strong component driving the differences seen here among races. Black residents had the highest rates of homicides at every age. Blacks aged 20-24 had more than nine times the risk of dying from homicide compared to non-Black residents of the same age. A closer look at homicides against Black residents aged 15 through 34 reveals that 102 out of 123 (83%) were men. About three quarters (93 out of 123) died as a result of firearm injuries, another 15% (18 individuals) were stabbed to death. The risk of homicide also increased among Black residents over 75 years old.

On average, for every homicide among San Francisco residents, there were 12 hospitalizations for assaults during fiscal year 1990-1991. Very similar age and race patterns are seen with assault hospitalizations as were seen with homicides. The majority (86%) of assault hospitalizations were for adolescents and adults aged 15 through 44. Nearly half of all hospitalizations for assaults were for Black men aged 15 through 44 years. Overall, Blacks had more than three times the risk of being hospitalized for assaults compared to Hispanics, 6 times the risk of Whites, and about 8 times the risk of those recorded under "Asian/Other". Figure 50 shows the rates of assault hospitalizations by age and race. One hundred and eighty-two (16%)

hospitalizations were due to shootings, 362 (31%) to stabbings, 280 (24%) to unarmed fights or brawl, 166 (14%) to blunt instrument assaults, and the remainder 160 (14%) to "other" or "unspecified" assaults.

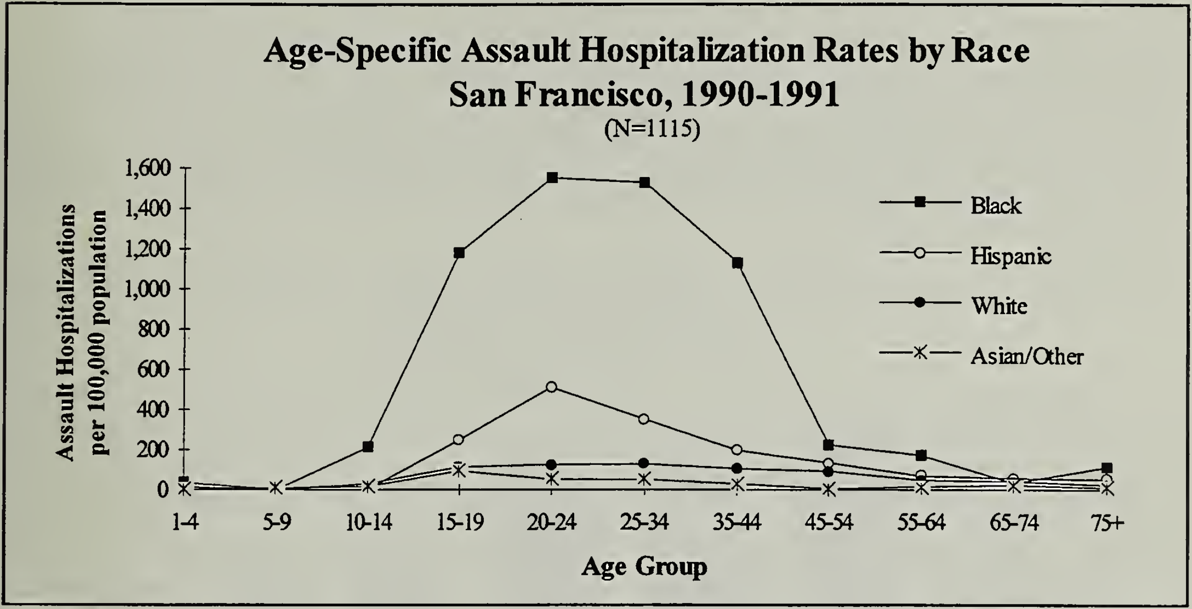


Figure 50.

Males were at much greater risk for assault that resulted in hospitalization and/or death, compared to females. Overall, for every female killed by another person, 4 males were killed; for every female hospitalized for an assault, 6 males were hospitalized. This gender difference cuts across race/ethnicity groups with the greatest difference seen among residents of Hispanic origin. Where 74% of homicides among Whites were males, 90% among Hispanics were males. Similarly, 86% of hospitalizations for assaults among Whites were of males while among Hispanics 92% were of males. Males tended to be assaulted with weapons more often than females. Among men who were hospitalized for assault, 65% had been assaulted with a knife, gun or blunt object compared with 43% of females. Among male homicides, 78% were completed with a knife or gun; among females it was 51%. Figure 51 shows the average yearly rates of assault hospitalizations and homicides for males and females.

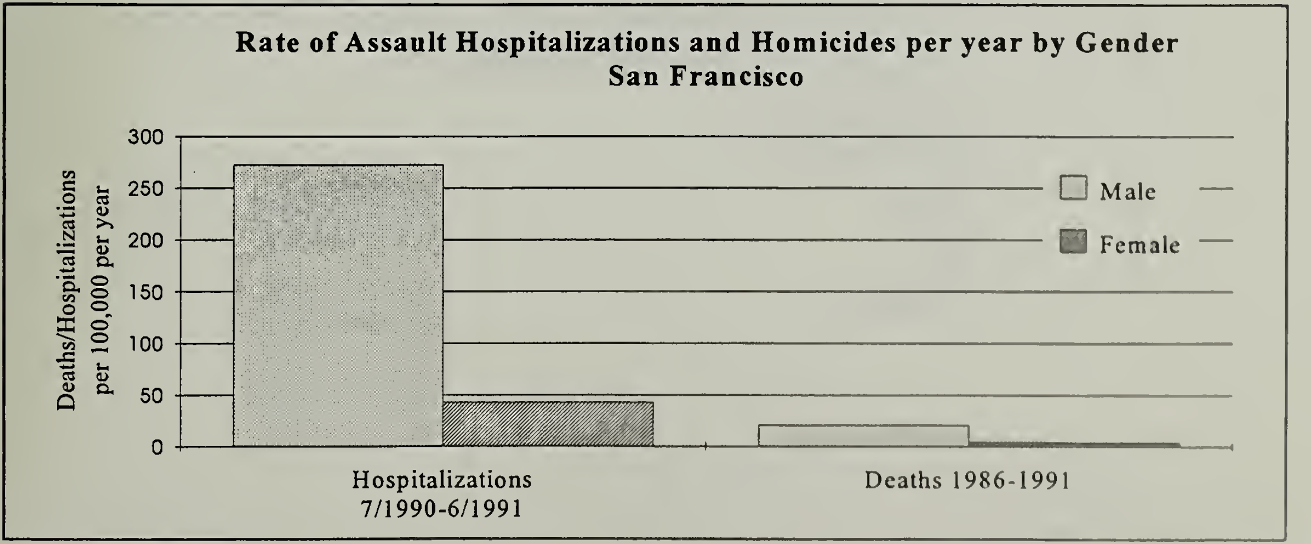
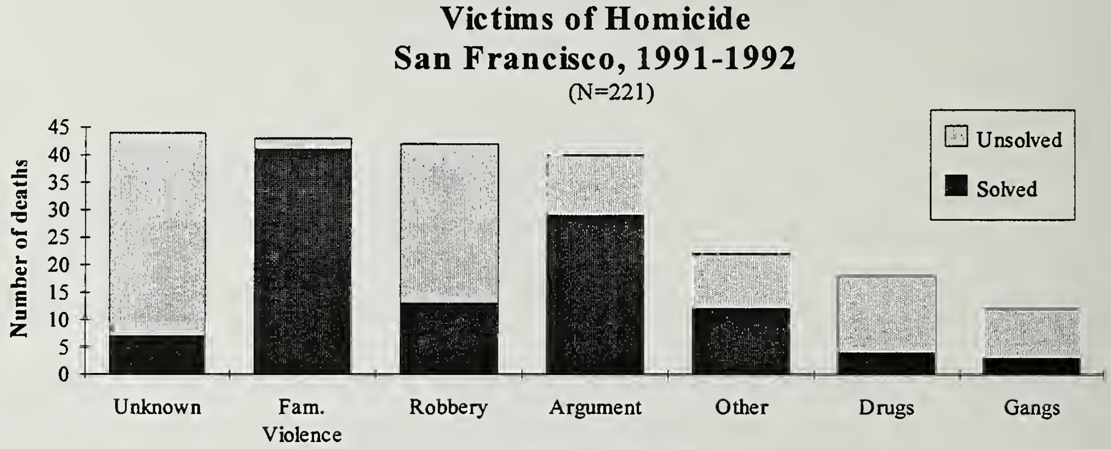


Figure 51.

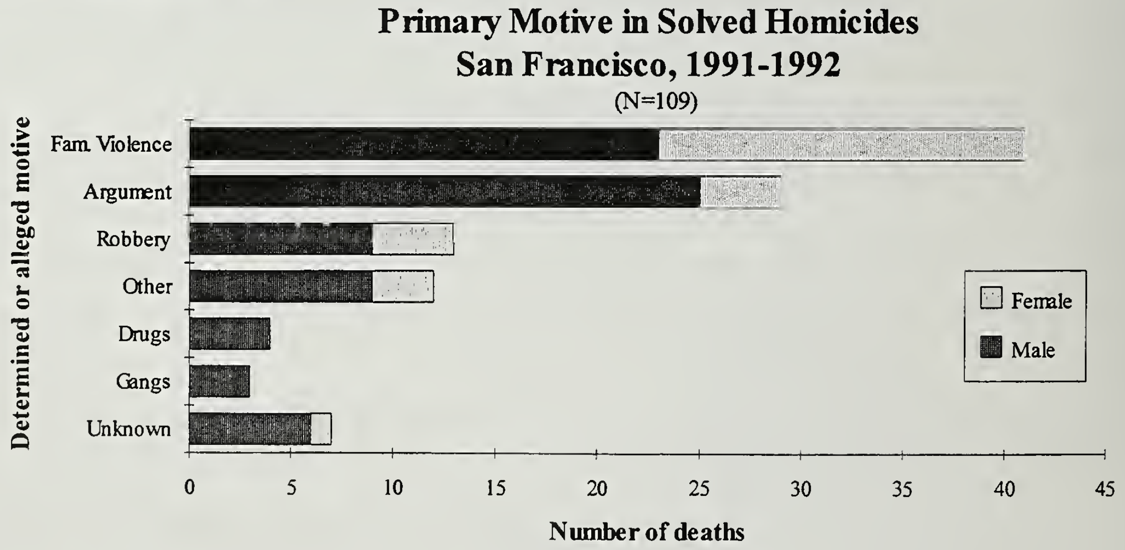
It is suspected that domestic violence is underreported as a cause of injury. If this is the case, then the rates of assaults reported here (especially among females) would be underestimated since some assaults would have been recorded as due to "accidental" or "unintentional" causes.

Domestic violence was found to be the most common motive of all solved homicides in San Francisco during 1991 and 1992, according to a study conducted by the Family Violence Prevention Fund in cooperation with the San Francisco Police Department. This study found that among solved homicides, *the number of family violence-related deaths exceeded the number of robbery, drug, gang and carjacking homicides combined.* Figures 52 and 53 display the results of this study in more detail.



Source: Commission on the Status of Women and the Family Violence Prevention Fund, in collaboration with the SF Police Department

Figure 52.



Source: Commission on the Status of Women and the Family Violence Prevention Fund, in collaboration with the SF Police Department

Figure 53.

The San Francisco Police Department identified 221 victims of homicide in the years 1991-1992. One hundred and twelve cases (51%) have been solved; 109 have not. Among the unsolved cases, there were 12 female and 100 male victims. A gun was used in 70 cases (63%).

Female victims in solved homicides in San Francisco 1991-1992: Family violence is a major threat to women in San Francisco. Eighteen (60%) of the solved homicides of women were attributable to family violence. Sixteen of the 18 women were killed by their male spouses or intimate partners. (One case involved a lesbian couple, and one case was coded a "mercy killing" of a mother by her son.) A gun was used in 60% of these family violence killings.

Among the 12 non-family violence homicides, 10 women were killed by men. The primary motives were arguments or robbery. A gun was used in 40% of these cases.

Male victims in solved homicides in San Francisco 1991-1992: Family violence also accounted for a large percentage of the solved male homicides in San Francisco. Twenty-three (30%) of the solved male homicides were attributable to family violence, but the motivational patterns were different. Fifteen of the 23 men were killed by other men. Five males with a history of battering were killed by other males defending women family members or friends; of the 8 adult males killed by females, 4 had a record of battering. Child abuse accounted for the deaths of 5 male infants and children. A gun was used in 43 % of these family violence cases.

Among the 56 non-family violence male homicides, arguments were cited as the motive in 25 cases, and robbery in 9 cases. Four homicides were directly attributable to drugs, 3 to gangs, and 1 to a drive-by shooting. "Other" motives include sour business deals, revenge, and assassination. Motivation was unknown in 6 cases. A gun was used in 55% of the non-family violence homicides.

Yearly Trends

Consideration of yearly trends of homicides indicates that firearms accounted for an increasing proportion of homicides especially beginning in 1990. The rate of non-firearm homicides declined somewhat from 1986 through 1991; the firearm homicide rates nearly doubled from 1989 to 1990 and decreased only somewhat in 1991.

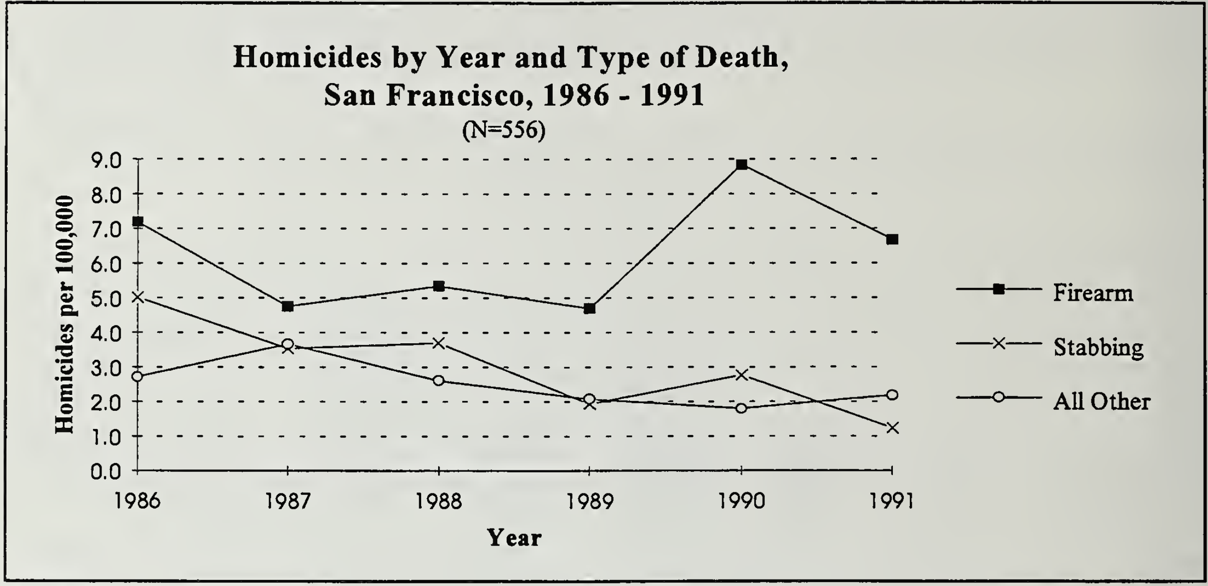


Figure 54.

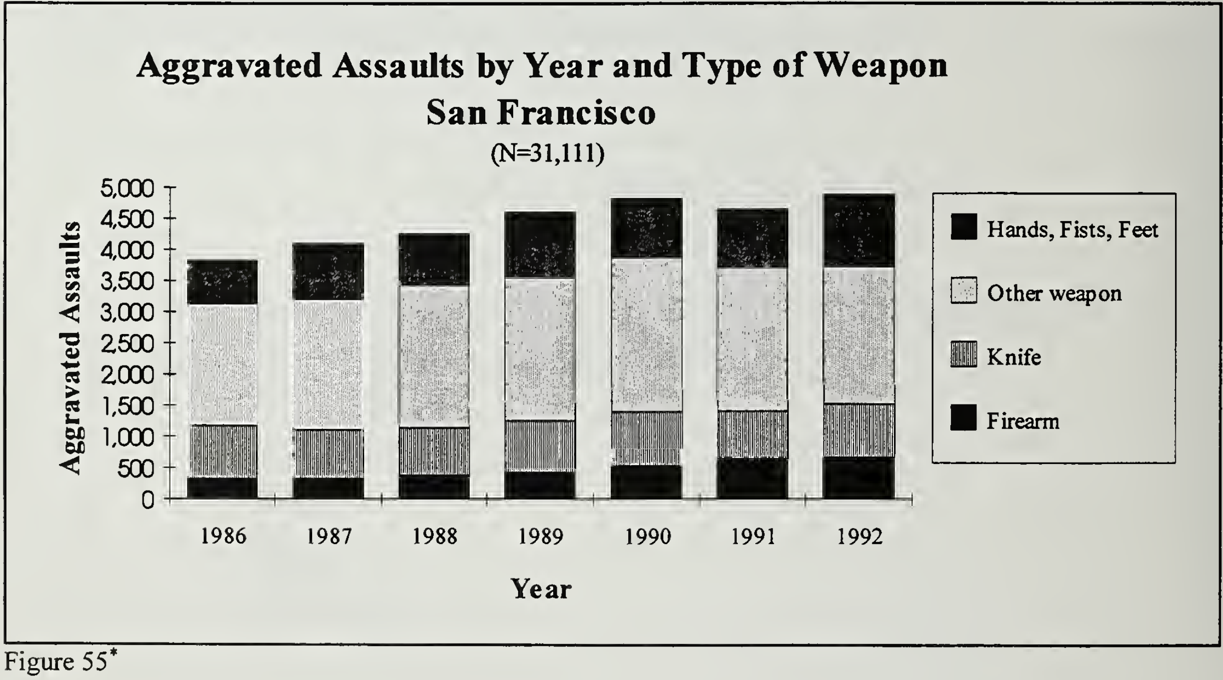


Figure 55*

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* Note: The aggravated assaults shown in figure 55 refer to assaults which occurred in San Francisco, as opposed to assaults perpetrated against San Francisco residents.

Police data regarding weapon usage in aggravated assaults corroborates patterns seen with homicides to some degree. Aggravated assaults with firearms approximately doubled from 1986 to 1992. Trends of other weapon use are more difficult to discern.

Police data are included here because the prevalence and use of weapons is clearly related to resulting injury. Police data must be considered with caution, though; like any collection of information it is collected for its own purposes. Police crime data focus on crimes and weapons involved, not injury. Aggravated assault does not necessarily mean resulting injury.

Firearms were the single most common instrument used in homicides. Of the 130 residents who were 24 years or younger when they were killed, firearms were used 72% of the time (figure 56). Stabbing deaths become somewhat more prominent after age 25 as do other forms of killing. Suffocation as a means to kill another person was used primarily against the elderly.

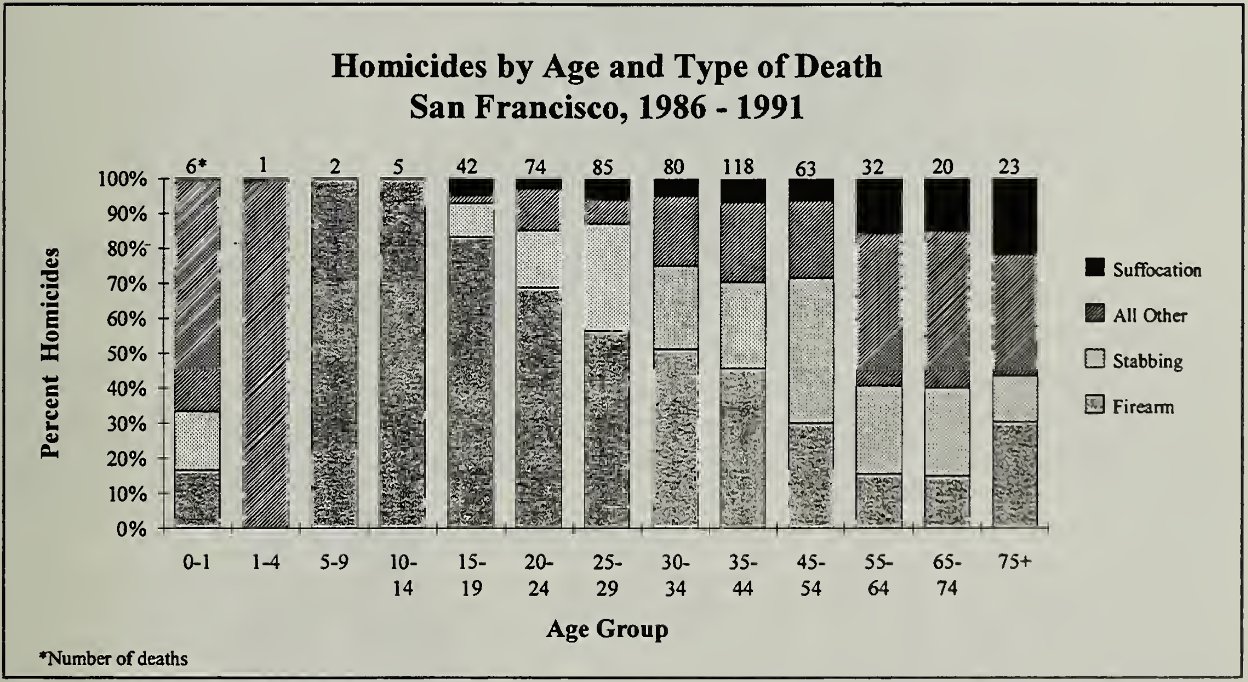
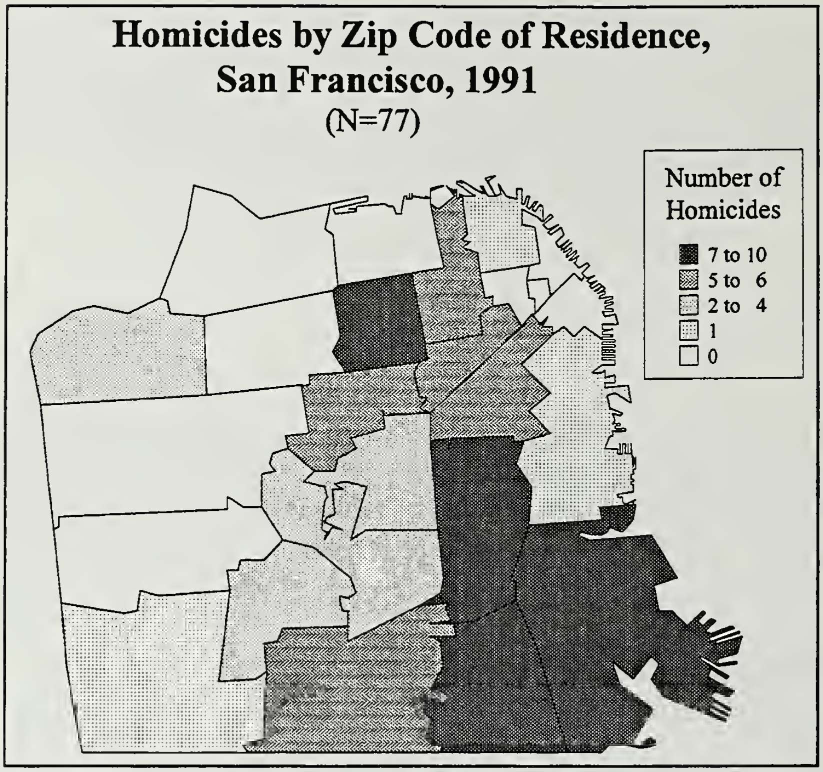


Figure 56.

Geographic Distribution of Homicides and Assaults

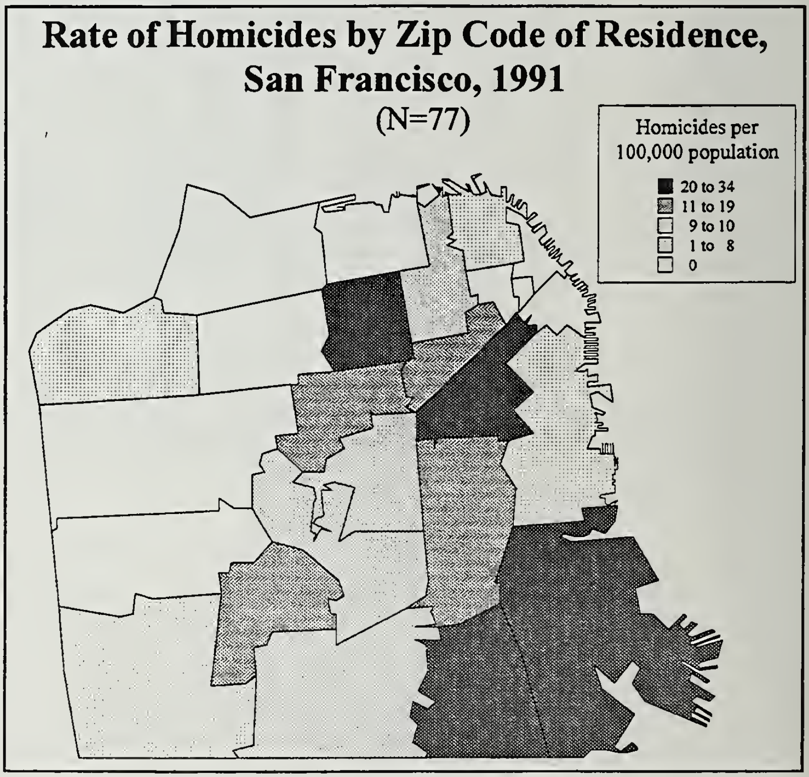


Homicides by Zip Code of Residence, San Francisco, 1991
(N=77)

Figure 57.

Counts and rates of homicides show two slightly different pictures. Homicides were most frequently committed against residents who lived in the Western Addition, Mission and Bayview-Hunters Point neighborhoods.

Taking the populations of these areas into account, homicides were somewhat less frequent on a per capita basis in the Mission, and somewhat more frequent in the South of Market area. Residents in the western parts of the city-- Sunset and Richmond neighborhoods-- suffered the fewest homicides by either standard.



Rate of Homicides by Zip Code of Residence, San Francisco, 1991
(N=77)

Figure 58.

Visits to San Francisco General Hospital Emergency Department for Gun Shot Wound, by Zip Code of Residence,
and
9-1-1 Responses for Penetrating Trauma, 1992

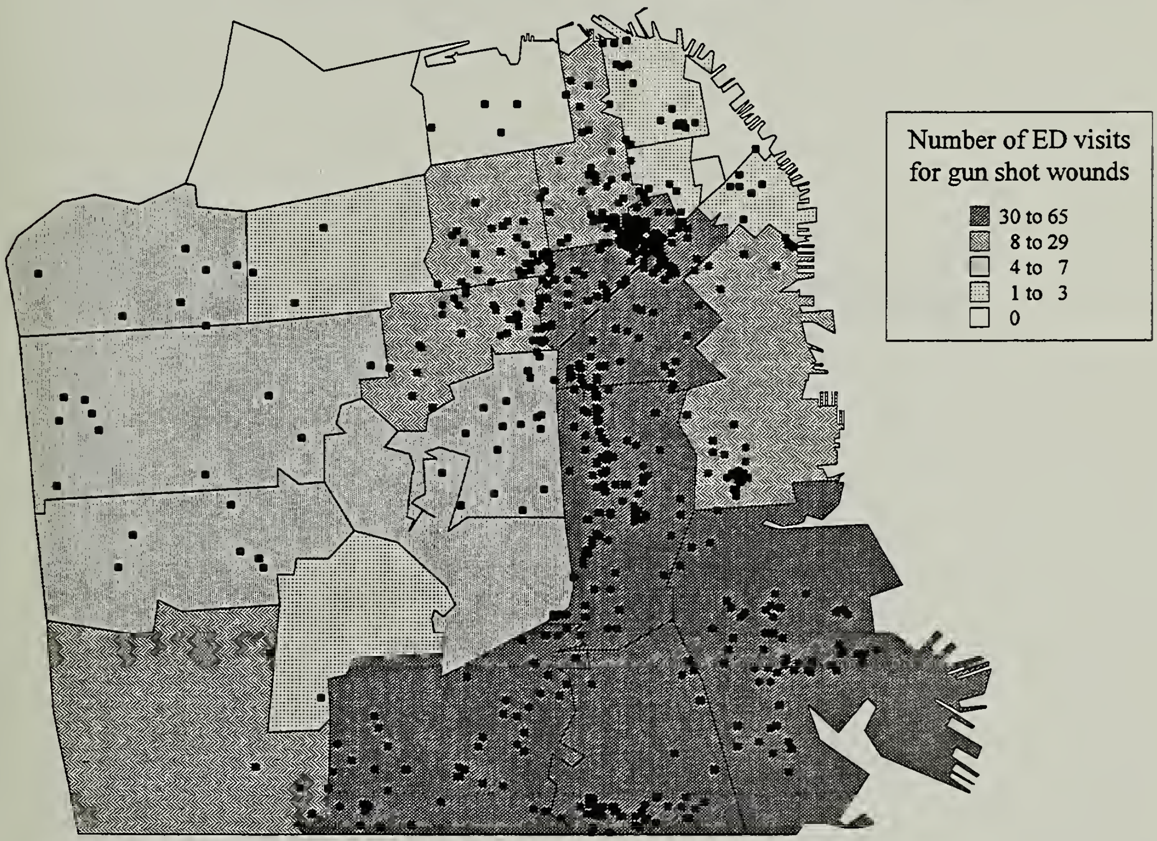


Figure 59. **The shaded areas represent the residence zip codes of patients brought to San Francisco General Hospital Emergency Department for a gun shot wound; the points represent 9-1-1 responses for penetrating trauma (overwhelmingly gunshot wounds and stabbings).**

The geographic distribution of residents who presented at the Emergency Department of San Francisco General Hospital with gun shot wounds, and the sites of 9-1-1 responses for penetrating trauma, show similar patterns as do homicides (and firearm deaths, p.43). In figure 59 the shaded areas represent the resident zip codes of 368 patients who arrived at San Francisco General Hospital Emergency Department with gun shot wounds in 1992. The points on this map represent 797 9-1-1 responses for penetrating trauma incidents in 1992. Eighty-seven percent of these trauma incidents were for gun shots, stabbings, or other assaults (the remaining 13% were a penetrating injury that resulted from an unintentional act.). Penetrating trauma incidents were especially concentrated in the Tenderloin, South of Market, Civic Center, and along the Mission Street corridor. The concurrence of penetrating trauma incidents and residence of gun shot patients indicates that to some extent it is the residents of these neighborhoods who are being injured.

Suicide/Self-Inflicted Injuries

Suicide/Self-Inflicted

Suicides outnumbered homicides for each year 1986 through 1991. Over the course of 6 years 844 San Franciscans took their own lives. Figure 60 shows the age and race distribution of these deaths.

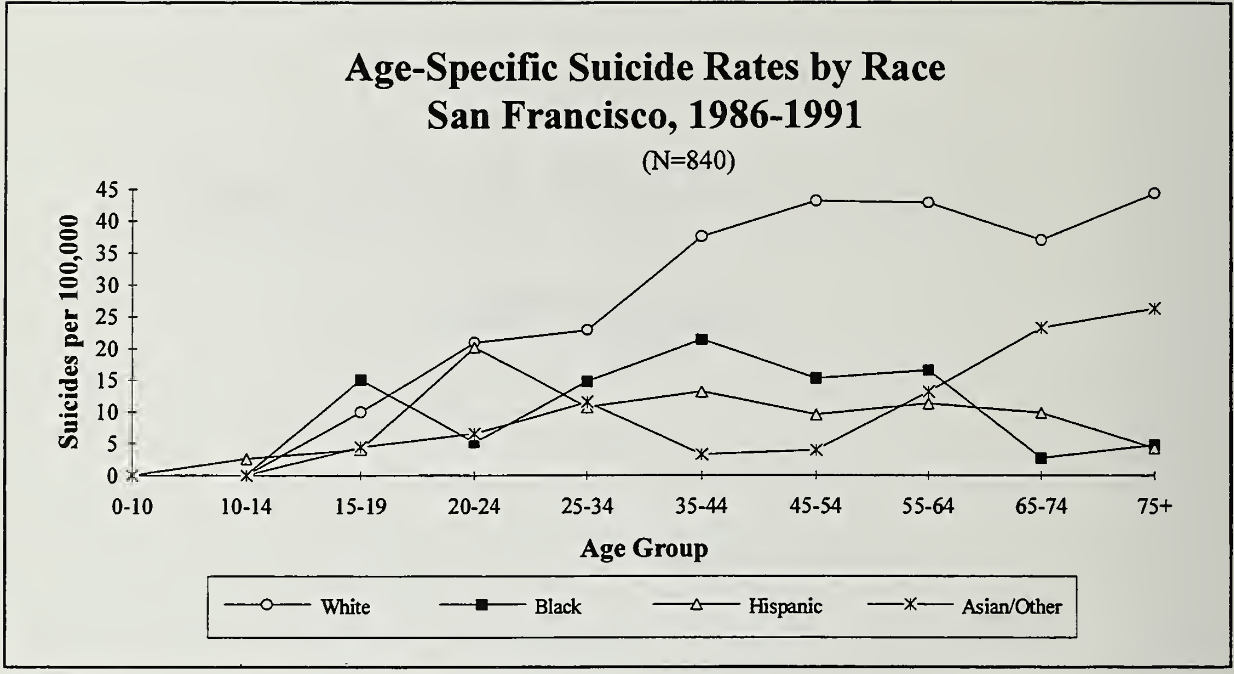


Figure 60.

The risk of suicide is highest among Whites and this risk increases with age. The highest rates among those included under "Asian/Other" were also achieved in the older ages. Rates of suicide among Black and Hispanic residents fluctuated more; rates among Hispanics peak in the 20 to 24 year range. Blacks had the highest rates in the 15 to 19 year range and the lowest rates among the elderly.

The methods used to commit suicide are shown by age in figure 61. Taken together, poisonings, firearms, suffocations and falls (jumping) accounted for 93% of all suicides. Poisonings and firearms were used equally often (239 and 238 deaths respectively) each accounting for 28% of all suicides; 22% of San Franciscans who committed suicide did so by suffocating and 14% by jumping.

For homicides it was the case that for every death, there were, on average, 12 hospitalizations for assaults. For suicides, for every completed suicide there were, on average, 1.5 hospitalizations for self-inflicted injuries (put differently, for every 2 suicides there were 3 hospitalizations for self-inflicted injury). In contrast to suicides, hospitalizations for self-inflicted injuries were primarily for poisoning (71%); "other" injury accounted for 22% of hospitalizations, while falls, firearms, and suffocations combined accounted for 7%. To some extent, the differences in methods used among self-inflicted deaths and hospitalizations attests to the lethality of falls and firearms.

Eighty-one percent of hospitalizations for self-inflicted injuries were of individuals 15 to 44 years old. This, too, is in contrast to suicides where about half of deaths were of individuals 44 years and younger and half were of individuals 45 and older.

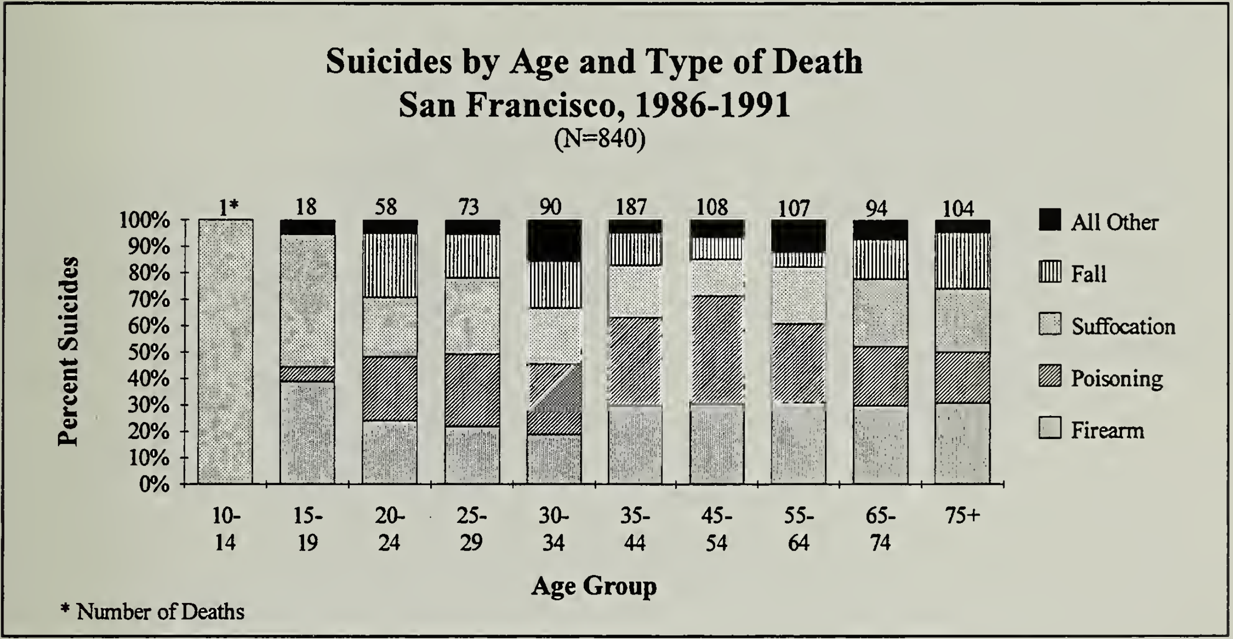
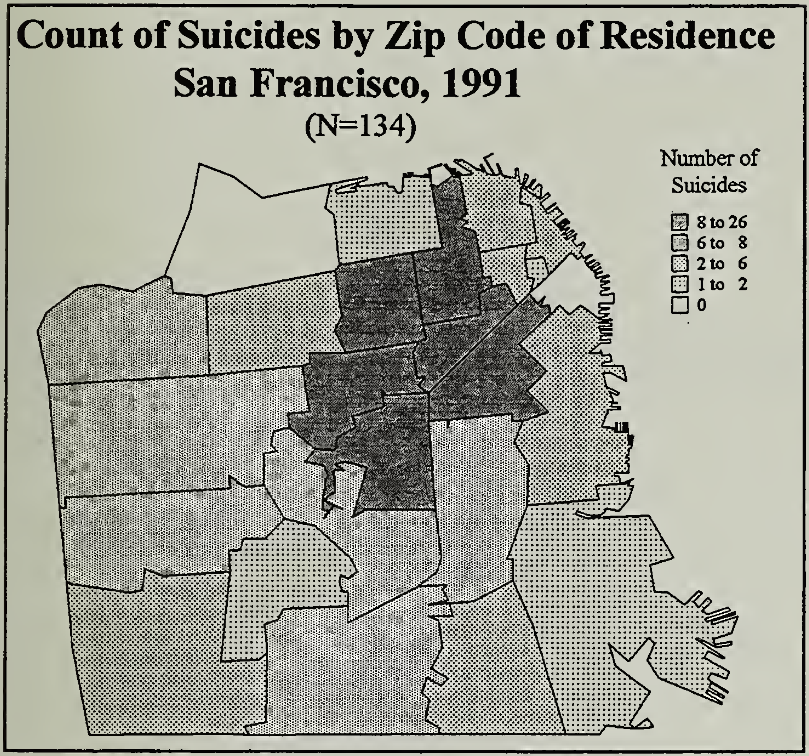


Figure 61.

Males accounted for 77% of suicides. More men than women committed suicide with firearms (31% and 18% respectively), while more women committed suicide by poisoning (39% and 25% respectively). More men were hospitalized for self-inflicted injuries, but the gender difference was not as pronounced as it was with completed suicides; 60% of hospitalizations were of men.

There were no significant variations or trends in the numbers of suicides per year in San Francisco from 1986 through 1991.

Geographic Distribution of Suicides

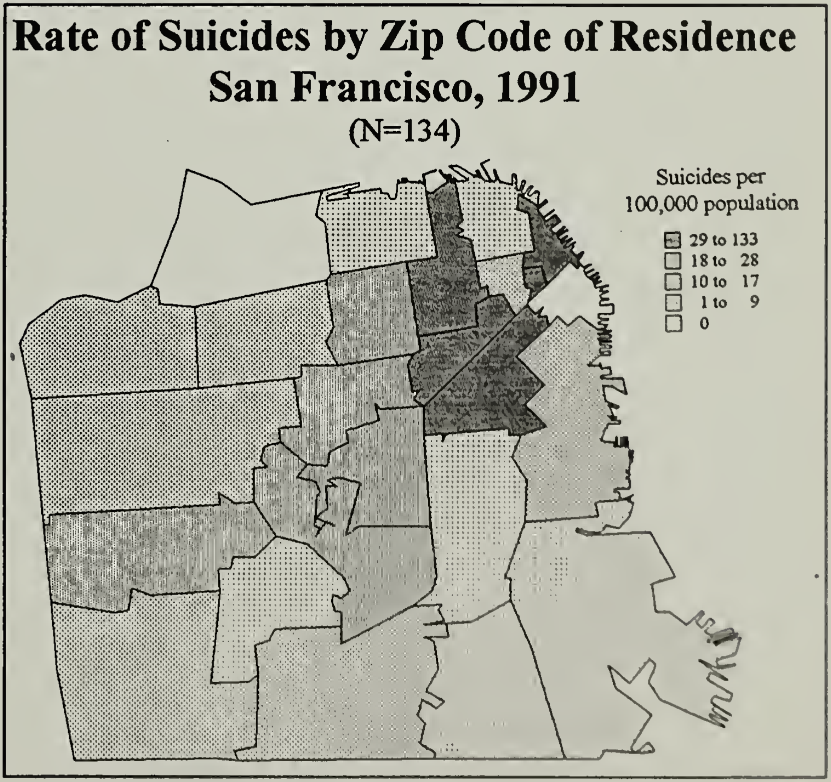


Count of Suicides by Zip Code of Residence
San Francisco, 1991
(N=134)

Figure 62.

Counts and rates of suicides show two slightly different pictures. Counts of suicides were highest around Market Street, the Civic Center and the Castro. Taking the populations of these areas into account, makes suicides somewhat less common on a per capita basis in the Upper Market area and Castro. By either measure, the Tenderloin and South of Market areas had the most suicides.

The distribution of suicides recalls the distribution of poisoning/drug overdose deaths. The Tenderloin and South of Market areas are among the poorest in the city (see page 84). Like poisoning/drug overdose deaths, we might expect suicides to be associated with poverty, homelessness and street drugs.



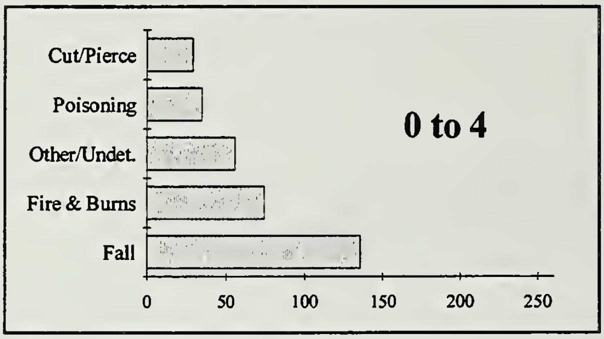
Rate of Suicides by Zip Code of Residence
San Francisco, 1991
(N=134)

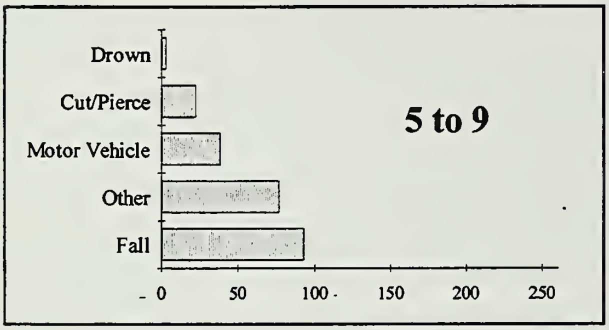
Figure 59.

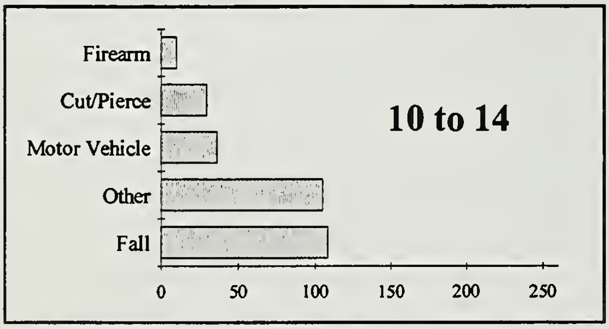
Age Patterns

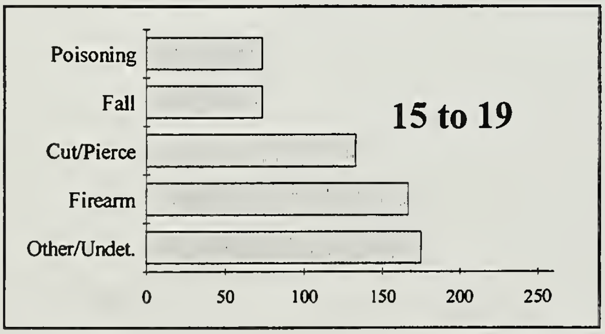
Injury Death and Hospitalizations Rates (per 100,000) by Age and Leading Cause, San Francisco

Hospitalizations 7/90-6/91

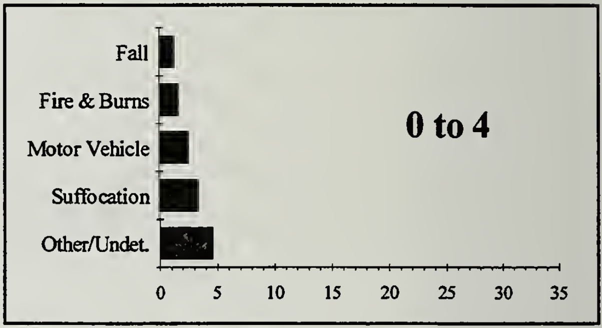


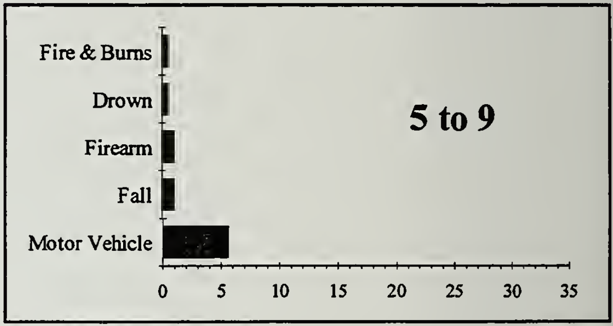


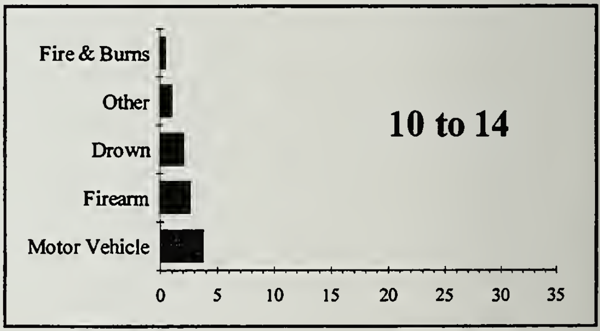


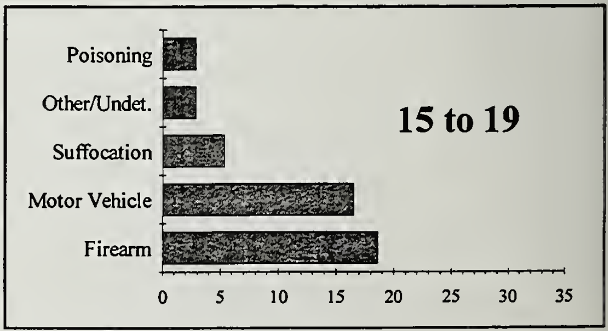


Deaths 1986-1991

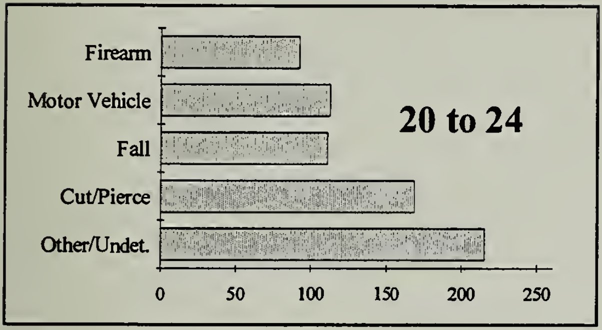


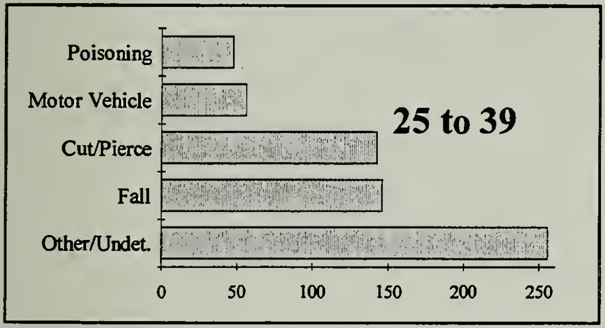


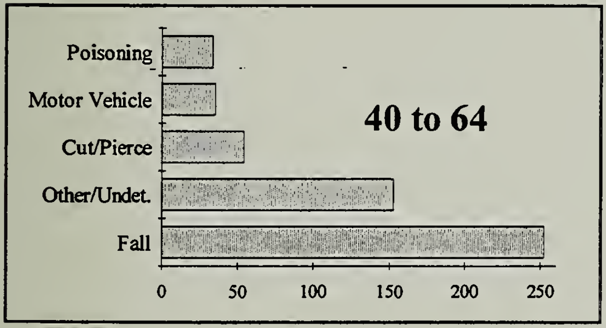


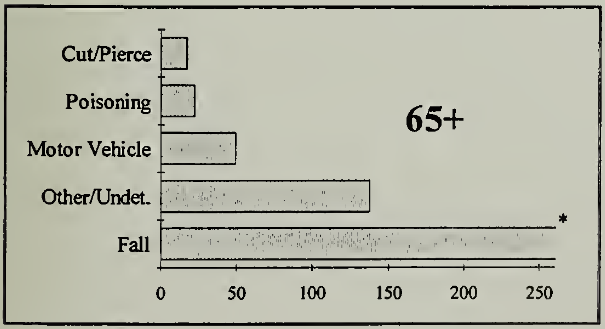


Hospitalizations 7/90-6/91

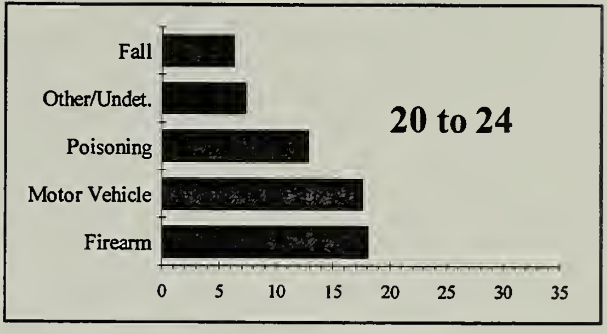


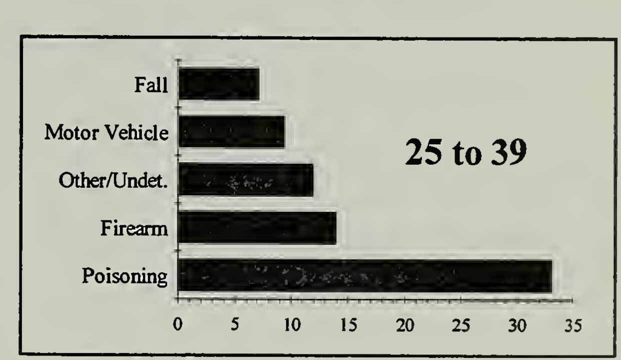


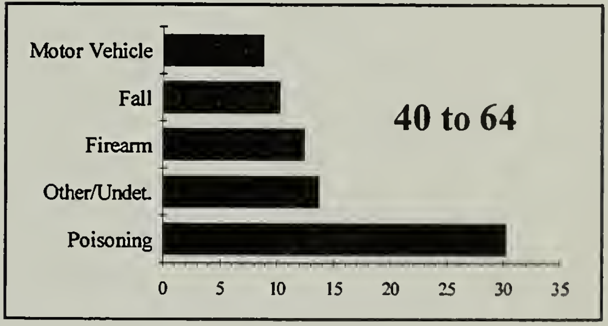


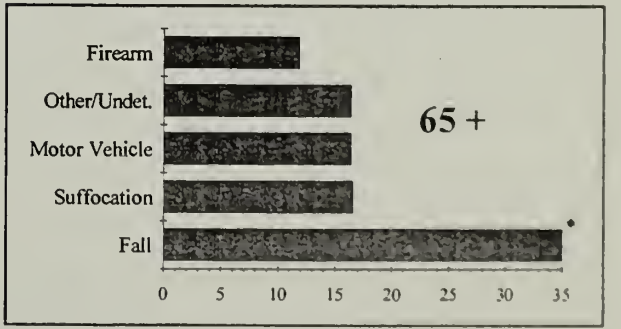


Deaths 1986-1991









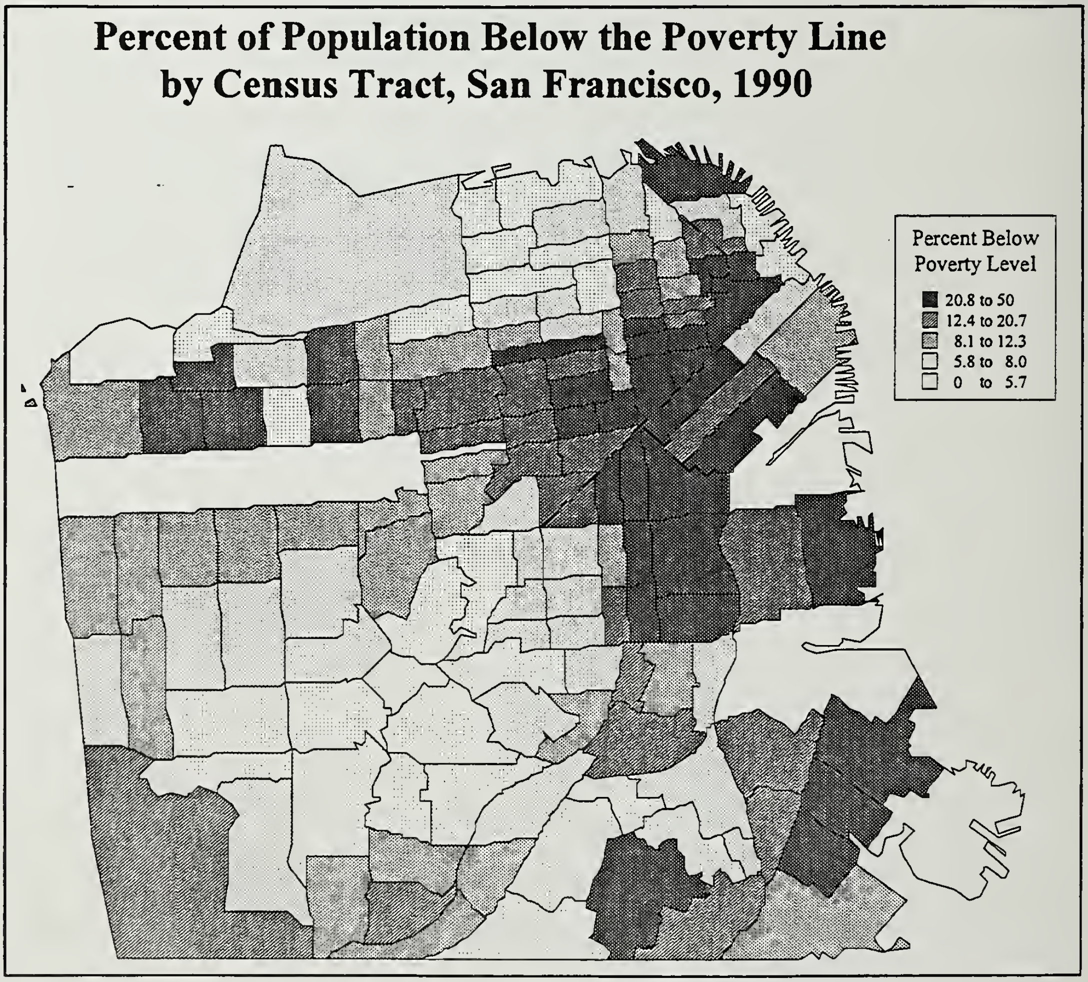
* The hospitalization rate for falls among those 65 years and older was 1525 per 100,000 per year; the death rate was 43 per 100,000 per year.

Geographic Patterns

Geographic Distribution of Injury

The San Francisco Department of Planning has published a *San Francisco Atlas* which compares data from the 1980 and 1990 census to permit trend analysis on how and where population changes in San Francisco have taken place. The *Atlas* contains maps of population density and ethnicity, housing density, distribution of rental and owner-occupied housing units, vacancy rates, median rents and housing value. From these maps it is clear that San Francisco is not a homogeneous city.

This *Profile* also includes maps to explore the geographic patterns of injury. Maps elucidate characteristics of the physical environment that cannot be captured with population data. For example, maps of traffic collisions may shed light on traffic patterns; areas of concentrated assaults or falls may indicate poorly lit areas. Maps also capture social dimensions of human habitation and activity. It is not coincidence that people who share certain economic, ethnic, and/or age characteristics, tend to live in the same areas. This *Profile* seeks to identify populations which are at special risk for injury. Maps add another dimension to such analysis by defining populations in term of place, in addition to the usual demographic features of age, gender, and race/ethnicity.

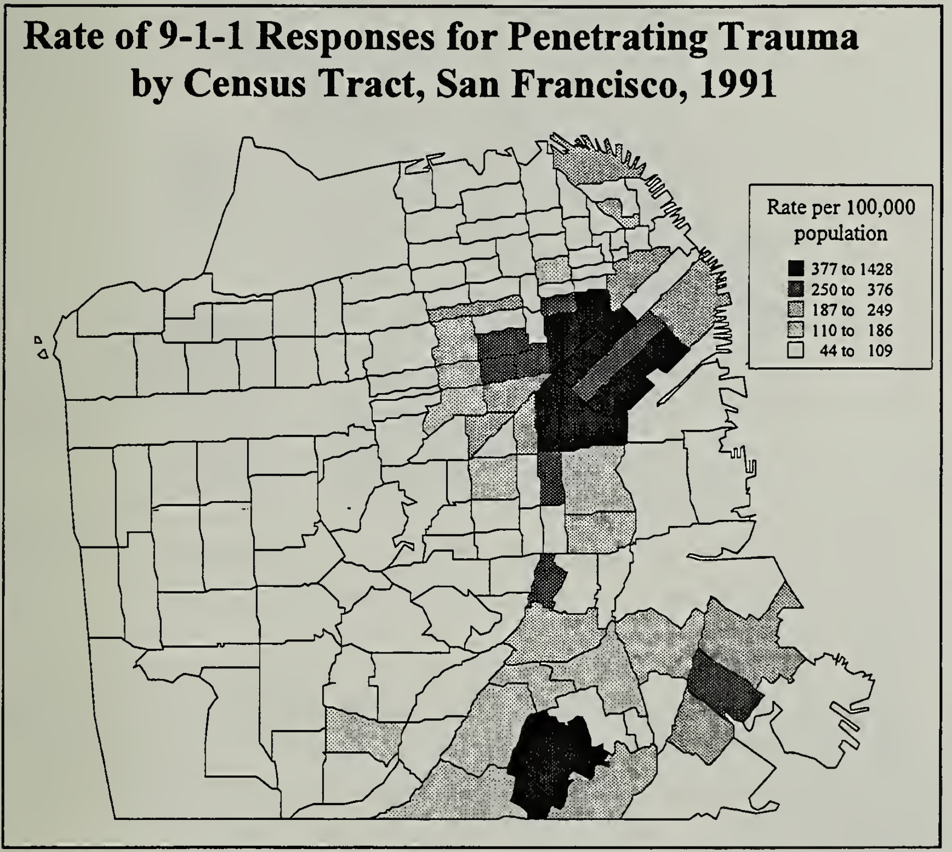


Percent of Population Below the Poverty Line by Census Tract, San Francisco, 1990

Figure 64.

Mapping injury also has the advantage of defining neighborhoods as units of analysis. Many activities and services are neighborhood-based; defining neighborhoods where residents are at relatively high risk for injury indicates where (literally) resources should be placed, and suggests possible community allies.

Maps in previous chapters for poisoning, firearm, motor-vehicle, and fall injuries revealed that the risk for many different types of injuries tended to be elevated in the same areas. It is well documented that poverty is a major risk factor for injury; therefor it is not surprising that many of these "high risk" areas are known poor areas. Figure 64 presents 1990 census data on the percentage of population living below the federal poverty level. The federal poverty level takes into account the number and ages of individuals supported by a given income.



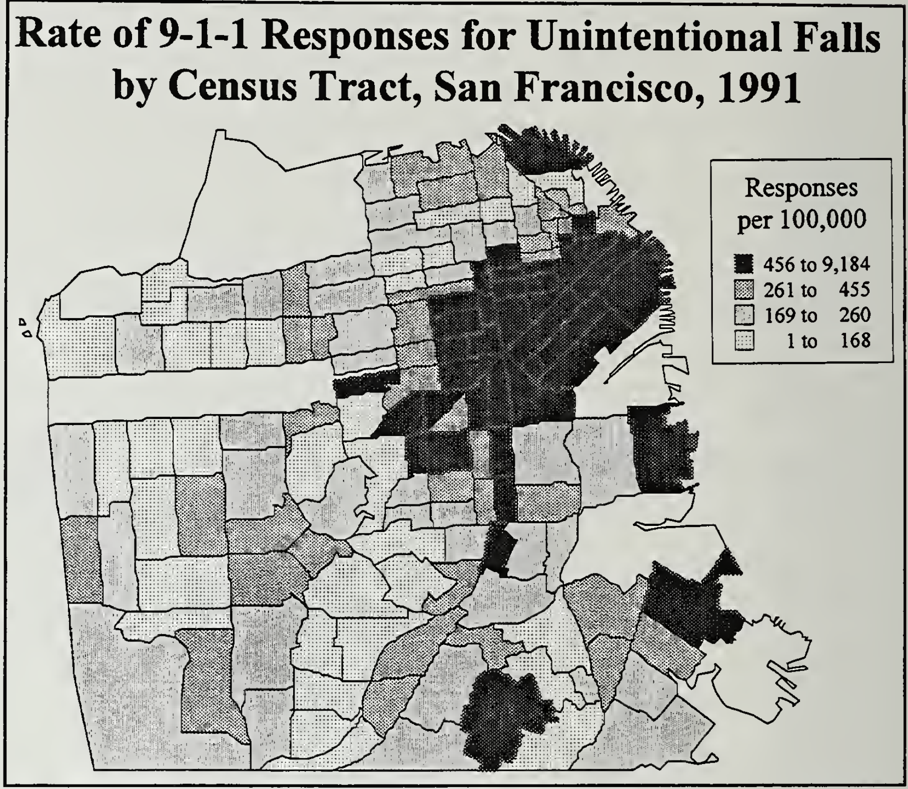
Rate of 9-1-1 Responses for Penetrating Trauma by Census Tract, San Francisco, 1991

Figure 65.

Figure 65 shows the rate of 9-1-1 responses for penetrating trauma by census tract. Only those tracts with 5 or more incidents were assigned rates and plotted since there is a lot of variability associated with rates based on fewer than 5 incidents. Eighty-seven percent of the penetrating trauma injuries resulted from shooting, stabbing, or other assault. (The remaining 13% resulted from an unintentional act.)

Clearly the distribution of penetrating trauma is associated with the distribution of poverty in San Francisco. This association is not a surprise since "poverty" carries with it a host of phenomena which are also linked to the likelihood of intentional injury: competition for scarce resources leading to crime, alcoholism, drug trafficking, deterioration of physical structures; perhaps more abstractly, attitudes of anger, hopelessness, "nothing to lose", leading to social chaos and violence. Future geographic analyses can examine such suspected correlates of both poverty and injury with special attention to those factors which lend themselves to change.

While it is clear that there is an association between poverty and violent injury, it may come as more of a surprise that there appears to be an equally strong association of poverty with un̲i̲ntentional injuries. Figure 66 shows the distribution of 9-1-1 responses for falls by census tract. Unintentional falls were concentrated in the downtown and South of Market areas, along Mission Street, Bayview Hunters Point, and McLaren Park-- the same areas which are most affected by i̲n̲tentional injuries and which are also arguably the most resource-poor.



Rate of 9-1-1 Responses for Unintentional Falls by Census Tract, San Francisco, 1991

Figure 66.

One drawback to using 9-1-1 responses as a source of injury occurrence is that this data implicitly incorporates patterns of health care utilization. It may be that residents with fewer resources disproportionately use the 9-1-1 system compared to those who have more resources, including health insurance coverage.

The following two maps (figures 67 and 68) show poverty distribution and all-injury mortality by zip code. Injury deaths are not as subject to a bias of health care utilization as 9-1-1 data are. (Poverty information was not available by zip code so census tract information was aggregated to resemble zip code boundaries as closely as possible.)

Again, there is fairly good concordance between the distribution of injury death rates and the distribution of poverty, and the areas most heavily affected are the same as those seen in previous maps. Neighborhoods in the western part of the city appear to have higher death rates than are suggested by economic distribution. Of the many factors in addition to income which would affect death rates, age distribution might play an important role in these neighborhoods.

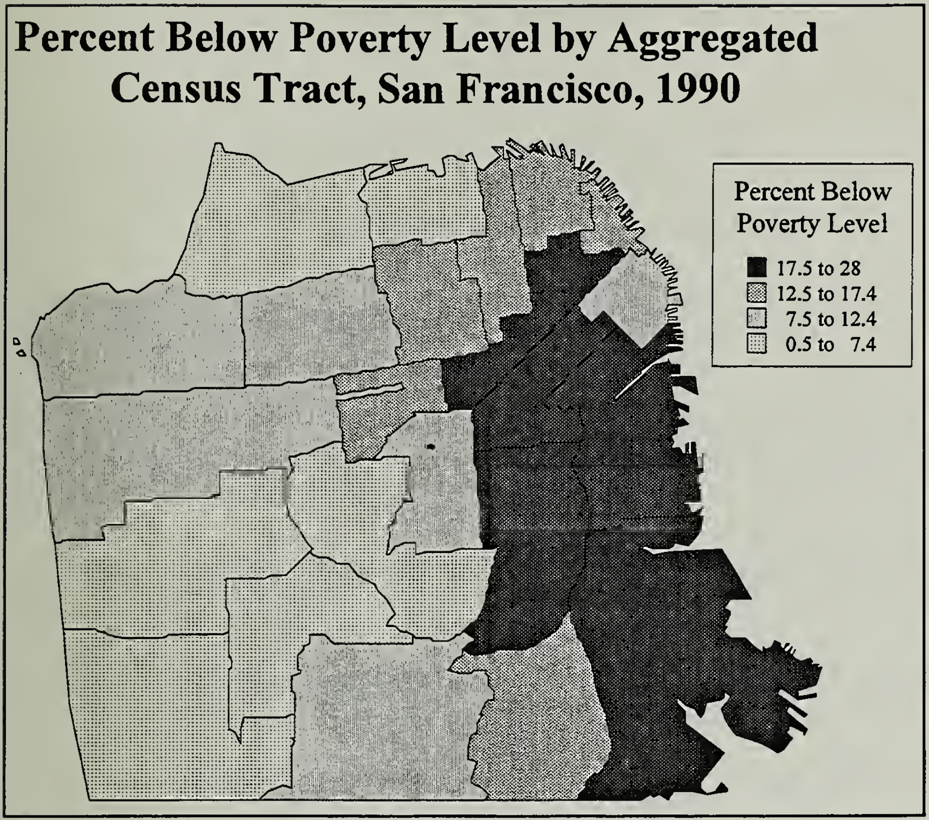

Percent Below Poverty Level by Aggregated Census Tract, San Francisco, 1990

Figure 67.

The association between poverty and high injury rates highlights the importance of a comprehensive strategy to prevent injury with the necessity that public health, medical and mental health communities join law enforcement, social services, public safety agencies, employees, and city government in assuming common responsibility for the prevention of injury.

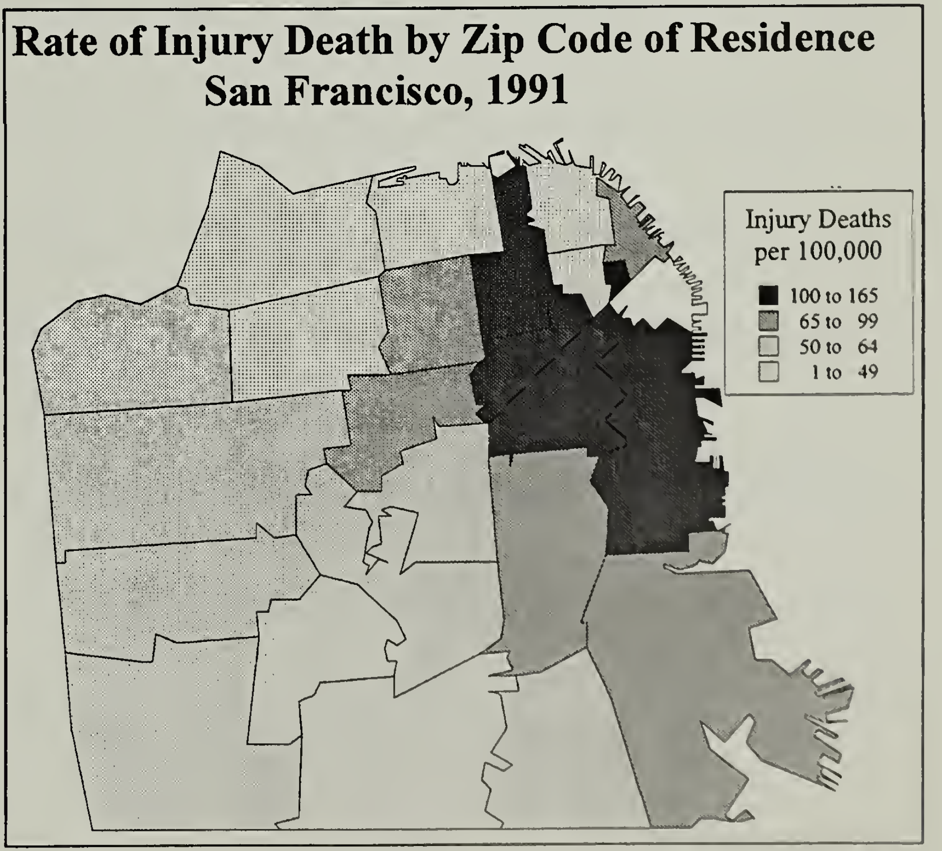

Rate of Injury Death by Zip Code of Residence San Francisco, 1991

Figure 68.

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APPENDIX A

Sources of Data

Mortality data: Computerized death certificate data by residence for the city and county of San Francisco, for the years 1986-1991 were obtained from the California Department of Health Services. Mortality records are of individuals based on an injury diagnosis as the underlying cause of death.

Hospital discharge data: Computerized hospital discharge data for San Francisco were obtained from the Office of Statewide Health Planning and Development (OSHPD) for the time period July 1990 through June 1991. This was the first complete year for which hospital discharge data were mandated to have E codes. Hospital discharge records are of hospitalizations, not individuals, based on an injury diagnosis being included as a reason for hospitalization. It is possible that the same people could be included more than once if they had completely different injuries that resulted in independent hospitalizations; hospitalizations for late effects and follow up treatment for a given index admission are excluded from analysis.

9-1-1 Paramedic data: E coded pre-hospital care records for 1991 were obtained from Allied Information Services, the billing agent for the Paramedic Division of the San Francisco Department of Public Health.

San Francisco General Hospital Emergency Department records: These records were computerized and E coded beginning January, 1992. Records which indicated a motor vehicle, fall, poisoning/drug overdose or firearm injury during the calendar year 1992 were obtained from quality improvement personnel at the Emergency Department.

1986 - 1992 San Francisco population data: Population data for the city and county of San Francisco were obtained from the U.S. Census Bureau for census year 1990. The California Department of Finance furnished estimated population data for the years 1986-1989 and 1991-1992, and population counts by zip code for the year 1990.

California Injury Mortality Data: State-wide injury mortality data for the year 1991 were obtained from the Mini Injury Surveillance System (MISS) of the California Department of Health Services. Like the mortality data obtained for San Francisco residents, this state-wide data set is based on death certificate data, and was used in this report to compare San Francisco with California.

E-Coding

E coding is a classification system which categorizes medical outcomes by their *external* cause and intent. It is used to supplement International Classification of Diseases, 9th edition (ICD9) codes which classify diagnoses by the *nature* of injuries. For example, the nature of an injury might be a cranial fracture, while the cause could be a fall, motor vehicle collision, or sports injury. E codes make it possible to distinguish among causes. E codes also classify intentionality when that information is known to the health care provider.

Hospitals were required by state law to E code patient records beginning July 1, 1990. This analysis considers hospital discharge data from July 1, 1990 through June 30, 1991 --the first complete year for which E coded hospital records are available.

Hospital discharge records and mortality records were selected for analysis based on E codes; codes E800-E999 refer to injuries. For both sets of data, we did not select cases that only had codes E870-E879 which correspond to "results of surgery", or E930-E949, "adverse effects of therapeutic drugs". These E codes are not required to be reported by hospitals and therefore are often excluded from analysis.

The organization of how E codes were grouped to form useful categories of injuries is shown in Appendix B. Two groupings are used in this report. First, injury deaths and hospitalizations were grouped into 68 causes modeled after those used in *The Injury Fact Book* in order to facilitate comparisons of San Francisco data with national data. (The *Injury Fact Book* is the premiere reference work on injury mortality in the United States.) Second, these 69 causes were aggregated into 8 causes with 5 possible associated intents.

Calculation of Rates

Age-specific rates were developed using population figures aggregated into 5-year intervals.

Populations counts used to develop hospitalization rates were calculated by averaging 1990 and 1991 counts respective of age, race and gender, since hospitalization records are dated from the second half of 1990 through the first half of 1991.

For all years except census year 1990, population counts were divided into four race/ethnicity groups: White, Black, Hispanic and Asian/Other. When it was desirable to generate rates for "Asian" alone as opposed to the combined category "Asian/Other", it was necessary to use 1990 population counts in the denominator.

Mapping

Maps were generated using the GIS software package MapInfo.

APPENDIX B

E Code Groupings of Injury

This *Profile* uses two groupings of injury. First, injuries were classified into 68 causes modeled after those used in the *Injury Fact Book.* Second, these 68 causes were aggregated into 8 causes and stratified by intent. The following 2 pages lists the E codes associated with each grouping. Appendix C lists counts of injury deaths and hospitalizations for each of the two groupings, and rates for the 68 causes.

E-Code Categories Used in this Profile of Injury in San Francisco*

Injury	ICD E-Code (9th Rev.)
UNINTENTIONAL	
Transportation	
1. Motor Vehicle-Train	810
2. Motor Vehicle-Occupant	810-819(.0,.1..9)
3. Motorcyclist	810-819(.2,.3)
4. Bicyclist	810-819(.6)
5. Pedestrian	810-819(.7)
6a. Remainder MV Traffic	810-819(.4,.5,.8)
6b. Motor Vehicle-Traffic (Total)	*810-819*
7. Pedestrian-Nontraffic	822.7
8. Pedestrian-Train	805.2
9. Aircraft	840-845
Drowning	
10. Boat-Related	830,832
11. Non-Boat	910
12. Drowning (Total)	*830, 832, 910*
Poisoning	
13. Opiates	850.0
14. Barbiturates	851
15. Tranquilizers	853
16. Antidepressants	854.0
17. Alcohol	860
18a. Remainder Solids/Liquids	850.1-.9, 852, 854.1-859, 861-866
18b. Solids/Liquids (Total)	*850-866*
19. Motor Vehicle Exhaust	868.2
20a. Remainder Gas/Vapor	867-868.1, 868.3-869
20b. Gas/Vapor (Total)	*867-869*
Falls	
21. Stairs	880
22. Ladder/Scaffold	881
23. Building/Structure	882
24. Different Level	884
25. Same Level	885
26. Other/Unspecified	883, 886-888
27. Fall (Total)	*880-888*
Fires and Burns	
28. Housefires	890
29. Clothing Ignition	893
30a. Remainder Excl. Scalds	891-892, 894-899
30b. Fires/Burns Excl. Scalds	890-899
31a. Scalds	924
31b. Fires/Burns (Total)	*890-899, 924*
Other Unintentional	
32. Firearm	922
33. Excessive Heat	900
34. Excessive Cold	901
35. Exposure/Neglect	904
36. Lightning	907
37. Natural Disaster	908-909
38. Aspiration-Food	911
39. Aspiration-Nonfood	912
40. Suffocation	913
41. Struck by Falling Object	916
42. Collision with Object/Person	917
43. Caught/Crushed	918
44. Machinery	919
45. Cutting/Piercing	920
46. Explosion	923
47. Electric Current	925
48a. Remainder Uninten. Excl. Traff.	800-805.1, 805.3-806, 820-822.6, 822.8-829, 831, 833-839, 846-849, 870-879, 902-903, 905-906, 914-915, 921-922, 926-929
48b. Unintentional Excl. Traffic	800-807, 820-949
49. Unintentional (Total)	*800-949*
SUICIDE/SELF-INFLICTED	
50. Firearm	955
51. Poison Solids/Liquids	950
52. Motor Vehicle Exhaust	952.0
53. Hanging	953
54. Drowning	954
55. Cutting/Piercing	956
56. Jumping	957
57a. Remainder Non-Firearm	951, 952.1-.9, 958-959
57b. Non-Firearm (Total)	950-954, 956-959
58. Suicide/Self-Inflicted (Total)	*950-959*
HOMICIDE/ASSAULT	
59. Firearm	965
60. Cutting/Stabbing	966
61. Strangulation	963
62. Other	960-962, 964, 967-969
63. Non-Firearm (Total)	960-964, 966-969
64. Homicide/Assault (Total)	*960-969*
65a. Legal Intervention-Firearm	970
65b. Remainder Legal Intervention	971-979
UNDETERMINED INTENT	
66. Undetermined-Firearm	985
67. Undet-Poison Solids/Liquids	980
68a. Remainder Undetermined	981-984, 986-989
68b. Undetermined (Total)	*980-989*
INJURIES (TOTAL)	800-999

* These categories were modeled after those used in the Injury Fact Book in order to facilitate comparisons of San Francisco data with national data.

The following E Codes were excluded from analysis: E870-E879, corresponding to injury resulting from surgery, and E930-E949, adverse effects of therapeutic drugs.

ICD9 E-Codes Categorized by Mechanism and Intent of Injury

Categorized by:			*Intent*			
Mechanism	Unintentional	Homicide	Suicide	Intent Undetermined	Legal Intervention	Total
Drown	830, 832, 910	964	954	984		830,832,910 954, 964, 984
Fall	880-888	968.1	957	987		880-888, 968.1, 957, 987
Fire & Burns	890-899; 924	968.0, .3	958.1, .2	988.1, .2		890-899, 924, 960.0, .3, 958.1, .2, 988.1, .2
Firearm	922	965	955	985	970	922, 955, 965, 970, 985
Motor Vehicle	810-825		958.5	988.5		810-825, 958.5, 988.5
Other	800-807, 826-829, 831, 833-849, 900-909, 914-919 920*, 921, 923, 925-929	960-961, 966*, 967, 968.2, .4, .9, 969, 990-999	956*, 958.0, .3 .4, 958.6-.9, 959	986, 988.0, .3, .4, 988.6-.9, 989	971, 973-978	800-807, 826-829, 831, 833-849, 900-909 914-921, 923, 925-929, 956, 958.0, .3, .4 .6-961, 966-967, 971, 973-978, 968.2, .4, .9 969, 986, 988.0, .3, .4, 988.6-.9, 989-999
Poisoning	850-869	962	950-952	980-982	972	850-869, 950-952 962, 972, 980-982
Suffocation	911-913	963	953	983		911-913 953, 963, 983
Total	800-949	960-969 990-999	950-959	980-989	970-979	800-999

* E codes 920, 956, and 966 refer to cutting/piercing with a sharp instrument. A separate category for cutting/piercing was created for hospitalizations (pp 7, 80-81).

The following E codes were excluded from analysis: E870-E879, corresponding to injury resulting from surgery, and E930-E949, adverse effects of therapeutic drugs.

APPENDIX C

Counts and Rates of Injury Deaths and Hospitalizations

Injury Deaths of San Francisco Residents, 1986-1991, 8 Causes and 5 Intents 98

Injury Hospitalizations of San Francisco Residents, July 1990 - June 1991, 8 Causes and 5 Intents 99

Table 1. Number of Injury Deaths and Death Rates by Gender and Race, San Francisco Residents, 1986-1991, 68 Causes 100

Table 2. Number of Injury Deaths by Age, San Francisco Residents, 1986-1991, 68 Causes .. 102

Table 3. Injury Death Rates per 100,000 Population per Year, by Age, San Francisco Residents, 1986-1991, 68 Causes 104

Table 4. Number of Injury Hospitalizations and Hospitalization Rates by Gender and Race, San Francisco Residents, July 1990 - June 1991, 68 Causes 106

Table 5. Number of Injury Hospitalizations by Age, San Francisco Residents, July 1990 - June 1991, 68 Causes 108

Table 6. Rates of Injury Hospitalization per 100,000 Population per Year, by Age, San Francisco Residents, July 1990 - 1991, 68 Causes 110

Injury Deaths of San Francisco Residents, 1986 - 1991

Categorized by:	*Intent*					
Mechanism	Unintentional	Homicide	Suicide	Intent Undetermined	Legal Intervention	Total
Drown	100	1	21	12	0	134
Fall	389	0	117	13	0	519
Fire & Burns	69	3	3	0	0	75
Firearm	7	274	238	9	2	530
Motor Vehicle	461	0	1	2	0	464
Other	154	239	38	43	0	474
Poisoning	624	1	239	66	0	930
Suffocation	80	39	187	7	0	313
Total	1,884	557	844	152	2	3,439

Injury Hospitalizations of San Francisco Residents, July 1990 - June 1991

Categorized by:	*Intent*					
Mechanism	Unintentional	Assaultive	Self-Inflicted	Intent Undetermined	Legal Intervention	Total
Cutting/Piercing	224	362	42	0	0	628
Drown	8	0	0	0	0	8
Fall	2631	5	3	3	0	2,642
Fire & Burns	130	1	1	2	0	134
Firearm	22	182	6	6	2	218
Motor Vehicle	373	0	0	0	0	373
Other	670	600	6	17	11	1,304
Poisoning	104	0	152	18	0	274
Suffocation	22	0	5	0	0	27
Total	4,184	1,150	215	46	13	5,608

Table 1. Number of Injury Deaths and Death Rates by Gender and Race, San Francisco Residents, 1986-1991

	Deaths									Deaths per 100,000 population per year					
Cause	Total	1986-1990	1991	Male	Female	White	Black	Hispanic	Asian/ Other*	Male	Female	White	Black	Hispanic	Asian/ Other
UNINTENTIONAL															
Transportation															
1. Motor Vehicle-Train	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Motor Vehicle-Occupant	320	265	55	223	97	142	52	42	84	10.17	4.42	6.84	10.93	6.99	6.82
3. Motorcyclist	14	10	4	12	2	8	4	0	2	0.55	0.09	0.39	0.84	0	0.16
4. Bicyclist	7	3	4	6	1	6	1	0	0	0.27	0.05	0.29	0.21	0	0
5. Pedestrian	114	94	20	67	47	46	16	13	39	3.06	2.14	2.21	3.36	2.16	3.17
6a. Remainder Motor Vehicle Traffic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6b. Motor Vehicle-Traffic (Total)	***455***	***372***	***83***	***308***	***147***	***202***	***73***	***55***	***125***	***14.05***	***6.70***	***9.72***	***15.35***	***9.16***	***10.15***
7. Pedestrian-Nontraffic	3	2	1	2	1	1	1	0	1	0.09	0.05	0.05	0.21	0	0.08
8. Pedestrian-Train	3	0	3	1	2	2	1	0	0	0.05	0.09	0.10	0.21	0	0
9. Aircraft	13	7	6	9	4	13	0	0	0	0.41	0.18	0.63	0	0	0
Drowning															
10. Boat-Related	20	17	3	17	3	8	3	1	8	0.78	0.14	0.39	0.63	0.17	0.65
11. Non-Boat	80	72	8	64	16	43	16	4	17	2.92	0.73	2.07	3.36	0.67	1.38
12. Drowning (Total)	***100***	***89***	***11***	***81***	***19***	***51***	***19***	***5***	***25***	***3.69***	***0.87***	***2.46***	***4.00***	***0.83***	***2.03***
Poisoning															
13. Opiates	174	159	15	148	26	118	35	17	4	6.75	1.19	5.68	7.36	2.83	0.32
14. Barbiturates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15. Tranquilizers	9	7	2	8	1	8	1	0	0	0.36	0.05	0.39	0.21	0	0
16. Antidepressants	9	9	0	5	4	7	1	0	1	0.23	0.18	0.34	0.21	0	0.08
17. Alcohol	20	16	4	18	2	14	2	4	0	0.82	0.09	0.67	0.42	0.67	0
18a. Remainder Solids/Liquids	404	341	63	313	91	227	119	41	17	14.28	4.15	10.93	25.02	6.82	1.38
18b. Solids/Liquids (Total)	***616***	***532***	***84***	***492***	***124***	***374***	***158***	***62***	***22***	***22.44***	***5.65***	***18.00***	***33.22***	***10.32***	***1.79***
19. Motor Vehicle Exhaust	2	1	1	0	2	1	0	1	0	0	0.09	0.05	0	0.17	0
20a. Remainder Gas/Vapor	6	4	2	2	4	2	2	1	1	0.09	0.18	0.10	0.42	0.17	0.08
20b. Gas/Vapor (Total)	***8***	***5***	***3***	***2***	***6***	***3***	***2***	***2***	***1***	***0.09***	***0.27***	***0.14***	***0.42***	***0.33***	***0.08***
Falls															
21. Stairs	18	15	3	13	5	16	0	1	1	0.59	0.23	0.77	0	0.17	0.08
22. Ladder/Scaffold	5	5	0	4	1	3	0	1	1	0.18	0.05	0.14	0	0.17	0.08
23. Building/Structure	21	17	4	18	3	14	1	5	1	0.82	0.14	0.67	0.21	0.83	0.08
24. Different Level	13	9	4	11	2	7	1	2	3	0.50	0.09	0.34	0.21	0.33	0.24
25. Same Level	2	2	0	2	0	2	0	0	0	0.09	0	0.10	0	0	0
26. Other/Unspecified	330	279	51	204	126	202	37	33	58	9.30	5.75	9.72	7.78	5.49	4.71
27. Fall (Total)	***389***	***327***	***62***	***252***	***137***	***244***	***39***	***42***	***64***	***11.49***	***6.25***	***11.75***	***8.20***	***6.99***	***5.20***
Fires and Burns															
28. Housefires	48	40	8	27	21	24	18	2	4	1.23	0.96	1.16	3.79	0.33	0.32
29. Clothing Ignition	1	1	0	0	1	1	0	0	0	0	0.05	0.05	0	0	0
30a. Remainder Fires/Burns Excl. Scalds	14	11	3	11	3	9	1	3	1	0.50	0.14	0.43	0.21	0.50	0.08
30b. Fires/Burns Excl. Scalds	63	52	11	38	25	34	19	5	5	1.73	1.14	1.64	4.00	0.83	0.41
31. Fires/Burns (Total)	***69***	***56***	***13***	***40***	***29***	***38***	***19***	***6***	***6***	***1.82***	***1.32***	***1.83***	***4.00***	***1.00***	***0.49***

Other Unintentional														
32. Firearm	7	5	2	6	1	2	1	1	3	0.27	0.05	0.10	0.21	0.17	0.24
33. Excessive Heat	2	2	0	1	1	2	0	0	0	0.05	0.05	0.10	0	0	0
34. Excessive Cold	11	10	1	8	3	7	3	0	1	0.36	0.14	0.34	0.63	0	0.08
35. Exposure/Neglect	7	6	1	3	4	4	2	0	1	0.14	0.18	0.19	0.42	0	0.08
36. Lightning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37. Natural Disaster	14	14	0	10	4	10	0	2	2	0.46	0.18	0.48	0	0.33	0.16
38. Aspiration-Food	34	29	5	16	18	24	3	0	7	0.73	0.82	1.16	0.63	0	0.57
39. Aspiration-Nonfood	27	24	3	13	14	19	3	2	3	0.59	0.64	0.91	0.63	0.33	0.24
40. Suffocation	19	17	2	12	7	11	3	4	1	0.55	0.32	0.53	0.63	0.67	0.08
41. Struck by Falling Object	8	7	1	7	1	3	1	1	3	0.32	0.05	0.14	0.21	0.17	0.24
42. Collision with Object/Person	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43. Caught/Crushed	1	1	0	1	0	1	0	0	0	0.05	0	0.05	0	0	0
44. Machinery	1	1	0	1	0	1	0	0	0	0.05	0	0.05	0	0	0
45. Cutting/Piercing	2	2	0	2	0	0	0	2	0	0.09	0	0	0	0.33	0
46. Explosion	1	1	0	0	1	0	0	1	0	0	0.05	0	0	0.17	0
47. Electric Current	1	1	0	1	0	0	1	0	0	0.05	0	0	0.21	0	0
48a. Remainder Uninten. Excl. Traffic	93	74	19	67	26	63	13	9	8	3.06	1.19	3.03	2.73	1.50	0.65
48b. Unintentional Excl. Traffic	1,429	1,212	217	1,027	402	873	269	139	148	46.84	18.33	42.03	56.57	23.14	12.01
49. Unintentional (Total)	*1,884*	*1,584*	*300*	*1,335*	*549*	*1,075*	*342*	*194*	*273*	*60.89*	*25.04*	*51.75*	*71.92*	*32.29*	*22.16*
SUICIDE															
50. Firearm	238	202	36	202	36	190	13	11	24	9.21	1.64	9.15	2.73	1.83	1.95
51. Poison Solids/Liquids	203	168	35	130	73	170	10	11	12	5.93	3.33	8.18	2.10	1.83	0.97
52. Motor Vehicle Exhaust	26	23	3	3	23	24	0	1	1	0.14	1.05	1.16	0	0.17	0.08
53. Hanging	187	150	37	151	36	119	12	18	38	6.89	1.64	5.73	2.52	3.00	3.08
54. Drowning	21	17	4	15	6	14	2	3	2	0.68	0.27	0.67	0.42	0.50	0.16
55. Cutting/Piercing	29	28	1	21	8	21	1	2	5	0.96	0.36	1.01	0.21	0.33	0.41
56. Jumping	117	94	23	86	31	83	10	7	17	3.92	1.41	4.00	2.10	1.17	1.38
57a. Remainder Non-Firearm Suicide	23	16	7	20	3	16	3	2	2	0.91	0.14	0.77	0.63	0.33	0.16
57b. Non-Firearm (Total)	606	496	110	426	180	447	38	44	77	19.43	8.21	21.52	7.99	7.32	6.25
58. Suicide (Total)	*844*	*698*	*146*	*628*	*216*	*637*	*51*	*55*	*101*	*28.64*	*9.85*	*30.67*	*10.72*	*9.16*	*8.20*
HOMICIDE															
59. Firearm	274	225	49	239	35	65	133	37	39	10.90	1.60	3.13	27.97	6.16	3.17
60. Cutting/Stabbing	133	124	9	116	17	41	51	28	13	5.29	0.78	1.97	10.72	4.66	1.06
61. Strangulation	39	28	11	18	21	21	7	4	7	0.82	0.96	1.01	1.47	0.67	0.57
62. Other	111	95	16	82	29	45	37	15	14	3.74	1.32	2.17	7.78	2.50	1.14
63. Non-Firearm (Total)	283	247	36	216	67	107	95	47	34	9.85	3.06	5.15	19.98	7.82	2.76
64. Homicide (Total)	*557*	*472*	*85*	*455*	*102*	*172*	*228*	*84*	*73*	*20.75*	*4.65*	*8.28*	*47.94*	*13.98*	*5.93*
65. Legal Intervention-Firearm	2	0	2	2	0	0	2	0	0	0.09	0	0	0.42	0	0
UNDETERMINED INTENT															
66. Undetermined-Firearm	9	9	0	8	1	4	0	0	5	0.36	0.05	0.19	0	0	0.41
67. Undet-Poison Solids/Liquids	63	51	12	44	19	49	7	5	2	2.01	0.87	2.36	1.47	0.83	0.16
68a. Remainder Undetermined	80	70	10	65	15	41	26	4	9	2.96	0.68	1.97	5.47	0.67	0.73
68b. Undetermined (Total)	*152*	*130*	*22*	*117*	*35*	*94*	*33*	*9*	*16*	*5.34*	*1.60*	*4.53*	*6.94*	*1.50*	*1.30*
INJURIES (TOTAL)	*3,439*	*2,884*	*555*	*2,537*	*902*	*1,978*	*656*	*342*	*463*	*115.71*	*41.13*	*95.22*	*137.94*	*56.93*	*37.59*

-- 's indicate that the values are zero across the entire category.

* Asians accounted for 348 (75%) of deaths classified as Asian/Other.

Table 2. Number of Injury Deaths by Age, San Francisco Residents, 1986-1991

Cause	0-	1-	5-	10-	15-	20-	25-	30-	35-	45-	55-	65-	75-	85+	Total*
UNINTENTIONAL															
Transportation															
1. Motor Vehicle-Train	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Motor Vehicle-Occupant	0	3	6	6	36	59	37	34	42	16	26	28	19	8	320
3. Motorcyclist	0	0	0	0	2	2	5	1	3	1	0	0	0	0	14
4. Bicyclist	0	0	0	0	0	0	3	0	2	2	0	0	0	0	7
5. Pedestrian	0	3	4	1	2	6	7	1	12	19	11	20	18	10	114
6a. Remainder Motor Vehicle Traffic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6b. Motor Vehicle-Traffic (Total)	*0*	*6*	*10*	*7*	*40*	*67*	*52*	*36*	*59*	*38*	*37*	*48*	*37*	*18*	*455*
7. Pedestrian-Nontraffic	0	0	1	0	0	0	0	0	0	1	0	0	1	0	3
8. Pedestrian-Train	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3
9. Aircraft	0	0	0	0	0	1	1	0	5	4	0	2	0	0	13
Drowning															
10. Boat-Related	0	0	0	0	0	2	3	4	3	3	4	1	0	0	20
11. Non-Boat	0	2	1	4	5	10	5	13	15	8	4	5	2	4	80
12. Drowning (Total)	*0*	*2*	*1*	*4*	*5*	*12*	*8*	*17*	*18*	*11*	*8*	*6*	*2*	*4*	*100*
Poisoning															
13. Opiates	0	1	0	0	0	10	17	36	73	20	12	1	1	0	174
14. Barbiturates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15. Tranquilizers	0	0	0	0	0	0	0	2	5	2	0	0	0	0	9
16. Antidepressants	0	0	1	0	0	1	0	1	5	0	1	0	0	0	9
17. Alcohol	0	0	0	0	1	0	1	4	10	3	0	0	0	0	20
18a. Remainder Solids/Liquids	0	0	0	0	4	23	49	81	152	45	31	8	6	0	404
18b. Solids/Liquids (Total)	*0*	*1*	*1*	*0*	*5*	*34*	*67*	*124*	*245*	*70*	*44*	*9*	*7*	*0*	*616*
19. Motor Vehicle Exhaust	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
20a. Remainder Gas/Vapor	0	0	0	0	0	1	0	1	0	2	0	1	1	0	6
20b. Gas/Vapor (Total)	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*2*	*0*	*2*	*0*	*1*	*2*	*0*	*8*
Falls															
21. Stairs	0	0	1	0	0	0	0	0	4	1	3	5	2	2	18
22. Ladder/Scaffold	0	0	0	0	0	0	0	1	0	1	2	1	0	0	5
23. Building/Structure	0	0	0	0	0	0	3	4	3	4	2	0	4	1	21
24. Different Level	1	0	0	0	0	1	1	2	2	1	1	1	3	0	13
25. Same Level	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
26. Other/Unspecified	0	2	1	0	2	9	2	12	32	26	31	49	90	71	330
27. Fall (Total)	*1*	*2*	*2*	*0*	*2*	*10*	*6*	*19*	*41*	*33*	*39*	*56*	*100*	*75*	*389*
Fires and Burns															
28. Housefires	1	2	1	1	0	3	1	2	6	3	1	9	14	4	48
29. Clothing Ignition	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
30a. Remainder Fires/Burns Excl. Scalds	0	0	0	0	0	0	1	0	4	2	2	1	2	1	14
30b. Fires/Burns Excl. Scalds	1	2	1	1	0	3	2	2	10	5	3	10	16	6	63
31. Fires/Burns (Total)	*1*	*3*	*1*	*1*	*0*	*3*	*2*	*2*	*10*	*5*	*4*	*10*	*17*	*9*	*69*

Other Unintentional															
32. Firearm	0	0	0	0	1	2	0	2	2	0	0	0	0	0	7
33. Excessive Heat	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
34. Excessive Cold	0	0	0	0	0	0	0	0	4	1	0	2	1	3	11
35. Exposure/Neglect	1	0	0	0	0	0	0	0	1	0	1	0	0	1	7
36. Lightning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37. Natural Disaster	1	0	0	0	0	2	3	1	3	3	1	0	0	0	14
38. Aspiration-Food	0	1	0	0	0	0	0	1	2	3	0	10	8	9	34
39. Aspiration-Nonfood	1	1	0	0	1	0	1	0	1	2	2	6	6	6	27
40. Suffocation	5	0	0	0	1	1	3	2	3	0	1	1	1	1	19
41. Struck by Falling Object	0	1	0	0	0	0	1	0	4	1	1	0	0	0	8
42. Collision with Object/Person	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43. Caught/Crushed	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
44. Machinery	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
45. Cutting/Piercing	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
46. Explosion	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
47. Electric Current	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
48a. Remainder Uninten. Excl. Traffic	0	0	0	1	0	3	4	11	13	5	8	15	16	17	93
48b. Unintentional Excl. Traffic	10	11	6	7	16	70	96	182	355	142	109	119	162	126	1,429
49. Unintentional (Total)	***10***	***17***	***16***	***14***	***56***	***137***	***148***	***218***	***414***	***180***	***146***	***167***	***199***	***144***	***1,884***
SUICIDE															
50. Firearm	0	0	0	0	7	14	16	17	56	33	33	28	17	15	238
51. Poison Solids/Liquids	0	0	0	0	1	12	18	21	52	39	25	16	15	3	203
52. Motor Vehicle Exhaust	0	0	0	0	0	2	1	3	7	3	5	3	1	1	26
53. Hanging	0	0	0	1	9	13	21	19	37	15	23	24	15	10	187
54. Drowning	0	0	0	0	1	2	1	5	3	2	4	1	1	1	21
55. Cutting/Piercing	0	0	0	0	0	1	0	5	4	2	8	6	2	1	29
56. Jumping	0	0	0	0	0	14	12	16	23	9	6	14	20	2	117
57a. Remainder Non-Firearm Suicide	0	0	0	0	0	0	4	4	5	5	3	2	0	0	23
57b. Non-Firearm (Total)	0	0	0	1	11	44	57	73	131	75	74	66	54	18	604
58. Suicide (Total)	***0***	***0***	***0***	***1***	***18***	***58***	***73***	***90***	***187***	***108***	***107***	***94***	***71***	***33***	***844***
HOMICIDE															
59. Firearm	1	0	2	5	35	51	48	41	54	19	5	3	7	0	274
60. Cutting/Stabbing	1	0	0	0	4	12	26	19	29	26	8	5	0	3	133
61. Strangulation	0	0	0	0	2	2	5	4	8	4	5	3	4	1	39
62. Other	4	1	0	0	1	9	6	16	28	14	14	9	4	4	111
63. Non-Firearm (Total)	5	1	0	0	7	23	37	39	65	44	27	17	8	8	283
64. Homicide (Total)	***6***	***1***	***2***	***5***	***42***	***74***	***85***	***80***	***119***	***63***	***32***	***20***	***15***	***8***	***557***
65. Legal Intervention-Firearm	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
UNDETERMINED INTENT															
66. Undetermined-Firearm	0	0	0	0	2	1	4	0	1	0	0	0	0	0	9
67. Undet-Poison Solids/Liquids	0	0	0	0	1	0	5	15	25	10	4	3	0	0	63
68a. Remainder Undetermined	2	2	0	0	1	4	9	7	16	10	11	9	1	4	80
68b. Undetermined (Total)	***2***	***2***	***0***	***0***	***4***	***5***	***18***	***22***	***42***	***20***	***15***	***12***	***1***	***4***	***152***
INJURIES (TOTAL)	***18***	***20***	***18***	***20***	***120***	***275***	***324***	***411***	***762***	***371***	***300***	***293***	***286***	***189***	***3,439***

* The total for each cause of injury may not add up to the sum of all ages combined, because age information was missing in 32 cases.

Table 3. Injury Death Rates per 100,000 Population per Year, by Age, San Francisco Residents, 1986-1991

Cause	0-	1-	5-	10-	15-	20-	25-	30-	35-	45-	55-	65-	75-	85+	Total
UNINTENTIONAL															
Transportation															
1. Motor Vehicle-Train	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Motor Vehicle-Occupant	0	1.61	3.07	3.25	15.01	15.66	7.96	7.37	5.59	3.66	6.56	8.15	8.76	9.94	7.30
3. Motorcyclist	0	0	0	0	0.83	0.53	1.08	0.22	0.40	0.23	0	0	0	0	0.32
4. Bicyclist	0	0	0	0	0	0	0.65	0	0.27	0.46	0	0	0	0	0.16
5. Pedestrian	0	1.61	2.05	0.54	0.83	1.59	1.51	0.22	1.60	4.34	2.78	5.82	8.30	12.42	2.60
6a. Remainder Motor Vehicle Traffic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6b. Motor Vehicle-Traffic (Total)	***0***	***3.23***	***5.12***	***3.79***	***16.68***	***17.78***	***11.18***	***7.81***	***7.85***	***8.69***	***9.34***	***13.96***	***17.06***	***22.36***	*10.38*
7. Pedestrian-Nontraffic	0	0	0.51	0	0	0	0	0	0	0.23	0	0	0.46	0	0.07
8. Pedestrian-Train	0	0	0	0	0	0	0	0	0	0.23	0	0	0.46	1.24	0.07
9. Aircraft	0	0	0	0	0	0.27	0.22	0	0.67	0.91	0	0.58	0	0	0.30
Drowning															
10. Boat-Related	0	0	0	0	0	0.53	0.65	0.87	0.40	0.69	1.01	0.29	0	0	0.46
11. Non-Boat	0	1.08	0.51	2.17	2.08	2.65	1.08	2.82	2.00	1.83	1.01	1.45	0.92	4.97	1.82
12. Drowning (Total)	***0***	***1.08***	***0.51***	***2.17***	***2.08***	***3.18***	***1.72***	***3.69***	***2.40***	***2.51***	***2.02***	***1.75***	***0.92***	***4.97***	*2.28*
Poisoning															
13. Opiates	0	0.54	0	0	0	2.65	3.66	7.81	9.72	4.57	3.03	0.29	0.46	0	3.97
14. Barbiturates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15. Tranquilizers	0	0	0	0	0	0	0	0.43	0.67	0.46	0	0	0	0	0.21
16. Antidepressants	0	0	0.51	0	0	0.27	0	0.27	0.67	0	0.25	0	0	0	0.21
17. Alcohol	0	0	0	0	0.42	0	0.22	0.87	1.33	0.69	0	0	0	0	0.46
18a. Remainder Solids/Liquids	0	0	0	0	1.67	6.10	10.54	17.56	20.23	10.29	7.83	2.33	2.77	0	9.22
18b. Solids/Liquids (Total)	***0***	***0.54***	***0.51***	***0***	***2.08***	***9.02***	***14.41***	***26.89***	***32.61***	***16.00***	***11.11***	***2.62***	***3.23***	***0***	*14.05*
19. Motor Vehicle Exhaust	0	0	0	0	0	0	0	0.22	0	0	0	0	0.46	0	0.05
20a. Remainder Gas/Vapor	0	0	0	0	0	0.27	0	0.22	0	0.46	0	0.29	0.46	0	0.14
20b. Gas/Vapor (Total)	***0***	***0***	***0***	***0***	***0***	***0.27***	***0***	***0.43***	***0***	***0.46***	***0***	***0.29***	***0.92***	***0***	*0.18*
Falls															
21. Stairs	0	0	0.51	0	0	0	0	0	0.53	0.23	0.76	1.45	0.92	2.48	0.41
22. Ladder/Scaffold	0	0	0	0	0	0	0	0.22	0	0.23	0.50	0.29	0	0	0.11
23. Building/Structure	0	0	0	0	0	0	0.65	0.87	0.40	0.91	0.50	0	1.84	1.24	0.48
24. Different Level	1.97	0	0	0	0	0.27	0.22	0.43	0.27	0.23	0.25	0.29	1.38	0	0.30
25. Same Level	0	0	0	0	0	0	0	0	0	0	0	0	0.46	1.24	0.05
26. Other/Unspecified	0	1.08	0.51	0	0.83	2.39	0.43	2.60	4.26	5.94	7.83	14.26	41.49	88.21	7.53
27. Fall (Total)	***1.97***	***1.08***	***1.02***	***0***	***0.83***	***2.65***	***1.29***	***4.12***	***5.46***	***7.54***	***9.85***	***16.29***	***46.10***	***93.18***	*8.87*
Fires and Burns															
28. Housefires	1.97	1.08	0.51	0.54	0	0.80	0.22	0.43	0.80	0.69	0.25	2.62	6.45	4.97	1.09
29. Clothing Ignition	0	0	0	0	0	0	0	0	0	0	0	0	0	1.24	0.02
30a. Remainder Fires/Burns Excl. Scalds	0	0	0	0	0	0	0.22	0	0.53	0.46	0.50	0.29	0.92	1.24	0.32
30b. Fires/Burns Excl. Scalds	1.97	1.08	0.51	0.54	0	0.80	0.43	0.43	1.33	1.14	0.76	2.91	7.38	7.45	1.44
31. Fires/Burns (Total)	***1.97***	***1.61***	***0.51***	***0.54***	***0***	***0.80***	***0.43***	***0.43***	***1.33***	***1.14***	***1.01***	***2.91***	***7.84***	***11.18***	*1.57*

Other Unintentional															
32. Firearm	0	0	0	0	0.42	0.53	0	0.43	0.27	0	0	0	0	0	0.16
33. Excessive Heat	0	0	0	0	0	0	0	0	0.13	0	0	0.29	0	0	0.05
34. Excessive Cold	0	0	0	0	0	0	0	0	0.53	0.23	0	0.58	0.46	3.73	0.25
35. Exposure/Neglect	1.97	0	0	0	0	0	0	0	0.13	0	0.25	0	0	1.24	0.16
36. Lightning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37. Natural Disaster	1.97	0	0	0	0	0.53	0.65	0.22	0.40	0.69	0.25	0	0	0	0.32
38. Aspiration-Food	0	0.54	0	0	0	0	0	0.22	0.27	0.69	0	2.91	3.69	11.18	0.78
39. Aspiration-Nonfood	1.97	0.54	0	0	0.42	0	0.22	0	0.13	0.46	0.50	1.75	2.77	7.45	0.62
40. Suffocation	9.86	0	0	0	0.42	0.27	0.65	0.43	0.40	0	0.25	0.29	0.46	1.24	0.43
41. Struck by Falling Object	0	0.54	0	0	0	0	0.22	0	0.53	0.23	0.25	0	0	0	0.18
42. Collision with Object/Person	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43. Caught/Crushed	0	0	0	0.54	0	0	0	0	0	0	0	0	0	0	0.02
44. Machinery	0	0	0	0	0	0.27	0	0	0	0	0	0	0	0	0.02
45. Cutting/Piercing	0	0	0	0	0	0	0	0.22	0.13	0	0	0	0	0	0.05
46. Explosion	0	0	0	0	0.42	0	0	0	0	0	0	0	0	0	0.02
47. Electric Current	0	0	0	0	0	0	0	0	0.13	0	0	0	0	0	0.02
48a. Remainder Uninten. Excl. Traffic	0	0	0	0.54	0	0.80	0.86	2.39	1.73	1.14	2.02	4.36	7.38	21.12	2.12
48b. Unintentional Excl. Traffic	19.72	5.92	3.07	3.79	6.67	18.58	20.65	39.47	47.25	32.46	27.52	34.62	74.68	156.55	32.59
49. Unintentional (Total)	***19.72***	***9.14***	***8.20***	***7.58***	***23.35***	***36.36***	***31.83***	***47.27***	***55.10***	***41.14***	***36.86***	***48.59***	***91.74***	***178.91***	*42.97*
SUICIDE															
50. Firearm	0	0	0	0	2.92	3.72	3.44	3.69	7.45	7.54	8.33	8.15	7.84	18.64	5.43
51. Poison Solids/Liquids	0	0	0	0	0.42	3.18	3.87	4.55	6.92	8.91	6.31	4.65	6.91	3.73	4.63
52. Motor Vehicle Exhaust	0	0	0	0	0	0.53	0.22	0.65	0.93	0.69	1.26	0.87	0.46	1.24	0.59
53. Hanging	0	0	0	0.54	3.75	3.45	4.52	4.12	4.92	3.43	5.81	6.98	6.91	12.42	4.26
54. Drowning	0	0	0	0	0.42	0.53	0.22	1.08	0.40	0.46	1.01	0.29	0.46	1.24	0.48
55. Cutting/Piercing	0	0	0	0	0	0.27	0.00	1.08	0.53	0.46	2.02	1.75	0.92	1.24	0.66
56. Jumping	0	0	0	0	0	3.72	2.58	3.47	3.06	2.06	1.51	4.07	9.22	2.48	2.67
57a. Remainder Non-Firearm Suicide	0	0	0	0	0	0	0.86	0.87	0.67	1.14	0.76	0.58	0	0	0.52
57b. Non-Firearm (Total)	0	0	0	0.54	4.59	11.68	12.26	15.83	17.44	17.14	18.68	19.20	24.89	22.36	13.78
58. Suicide (Total)	***0***	***0***	***0***	***0.54***	***7.50***	***15.39***	***15.70***	***19.52***	***24.89***	***24.69***	***27.01***	***27.35***	***32.73***	***41.00***	*19.25*
HOMICIDE															
59. Firearm	1.97	0	1.02	2.71	14.59	13.53	10.32	8.89	7.19	4.34	1.26	0.87	3.23	0	6.25
60. Cutting/Stabbing	1.97	0	0	0	1.67	3.18	5.59	4.12	3.86	5.94	2.02	1.45	0	3.73	3.03
61. Strangulation	0	0	0	0	0.83	0.53	1.08	0.87	1.06	0.91	1.26	0.87	1.84	1.24	0.89
62. Other	7.89	0.54	0	0	0.42	2.39	1.29	3.47	3.59	3.20	3.53	2.62	1.84	4.97	2.53
63. Non-Firearm (Total)	9.86	0.54	0	0	2.92	6.10	7.96	8.46	8.52	10.06	6.82	4.95	3.69	9.94	6.45
64. Homicide (Total)	***11.83***	***0.54***	***1.02***	***2.71***	***17.51***	***19.64***	***18.28***	***17.35***	***15.70***	***14.40***	***8.08***	***5.82***	***6.91***	***9.94***	*12.70*
65. Legal Intervention-Firearm	0	0	0	0	0	0.27	0	0.22	0	0	0	0	0	0	0.05
UNDETERMINED INTENT															
66. Undetermined-Firearm	0	0	0	0	0.83	0.27	0.86	0.00	0.13	0	0	0	0	0	0.21
67. Undet-Poison Solids/Liquids	0	0	0	0	0.42	0.00	1.08	3.25	3.33	2.29	1.01	0.87	0	0	1.44
68a. Remainder Undetermined	3.94	1.08	0	0	0.42	1.06	1.94	1.52	2.13	2.29	2.78	2.62	0.46	4.97	1.82
68b. Undetermined (Total)	***3.94***	***1.08***	***0***	***0***	***1.67***	***1.33***	***3.87***	***4.77***	***5.59***	***4.57***	***3.79***	***3.49***	***0.46***	***4.97***	3.47
INJURIES (TOTAL)	*35.50*	*10.76*	*9.22*	*10.83*	*50.03*	*72.98*	*69.68*	*89.12*	*101.42*	*84.80*	*75.74*	*85.24*	*131.84*	*234.82*	*78.43*

Table 4. Number of Injury Hospitalizations and Hospitalization Rates by Gender and Race, San Francisco Residents, July 1990 - June 1991

	Hospitalizations							Hospitalizations per 100,000 population per year						
Cause	Total*	Male	Female	White	Black	Hispanic	Asian/ Other**	Male	Female	Total	White	Black	Hispanic	Asian/ Other
UNINTENTIONAL														
Transportation														
1. Motor Vehicle-Train	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Motor Vehicle-Occupant	126	80	46	58	13	21	29	21.95	12.63	17.29	17.19	16.81	20.81	13.61
3. Motorcyclist	89	74	15	60	7	9	10	20.30	4.12	12.21	17.78	9.05	8.92	4.69
4. Bicyclist	11	10	1	9	1	0	1	2.74	0.27	1.51	2.67	1.29	0.00	0.47
5. Pedestrian	105	66	39	39	26	12	24	18.11	10.71	14.41	11.56	33.62	11.89	11.26
6a. Remainder MV Traffic	2	1	1	1	0	0	1	0.27	0.27	0.27	0.30	0	0	0.47
6b. Motor Vehicle-Traffic (Total)	*333*	*231*	*102*	*167*	*47*	*42*	*65*	*63.38*	*28.01*	*45.70*	*49.50*	*60.78*	*41.62*	*30.51*
7. Pedestrian-Nontraffic	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Pedestrian-Train	1	1	0	0	1	0	0	0.27	0	0.14	0	1.29	0	0
9. Aircraft	5	3	2	3	2	0	0	0.82	0.55	0.69	0.89	2.59	0	0
Drowning														
10. Boat-Related	1	1	0	0	0	0	1	0.27	0	0.14	0	0	0	0.47
11. Non-Boat	7	5	2	5	1	0	1	1.37	0.55	0.96	1.48	1.29	0	0.47
12. Drowning (Total)	*8*	*6*	*2*	*5*	*1*	*0*	*2*	*1.65*	*0.55*	*1.10*	*1.48*	*1.29*	*0*	*0.94*
Poisoning														
13. Opiates	6	4	2	5	1	0	0	1.10	0.55	0.82	1.48	1.29	0	0
14. Barbiturates	1	0	1	1	0	0	0	0.00	0.27	0.14	0.30	0	0	0
15. Tranquilizers	22	15	7	12	6	1	2	4.12	1.92	3.02	3.56	7.76	0.99	0.94
16. Antidepressants	6	5	1	4	1	0	0	1.37	0.27	0.82	1.19	1.29	0	0
17. Alcohol	8	5	3	4	1	3	0	1.37	0.82	1.10	1.19	1.29	2.97	0
18a. Remainder Solids/Liquids	59	35	24	30	13	11	3	9.60	6.59	8.10	8.89	16.81	10.90	1.41
18b. Solids/Liquids (Total)	*102*	*64*	*38*	*56*	*22*	*15*	*5*	*17.56*	*10.43*	*14.00*	*16.60*	*28.45*	*14.87*	*2.35*
19. Motor Vehicle Exhaust	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20a. Remainder Gas/Vapor	2	1	1	0	0	0	1	9.60	6.59	8.10	0	0	0	0.47
20b. Gas/Vapor (Total)	*2*	*1*	*1*	*0*	*0*	*0*	*1*	*0.27*	*0.27*	*0.27*	*0.00*	*0.00*	*0.00*	*0.47*
Falls														
21. Stairs	279	131	148	165	43	34	34	35.94	40.64	38.29	48.91	55.61	33.69	15.96
22. Ladder/Scaffold	64	50	14	36	5	15	5	13.72	3.84	8.78	10.67	6.47	14.87	2.35
23. Building/Structure	72	53	19	30	19	11	9	14.54	5.22	9.88	8.89	24.57	10.90	4.22
24. Different Level	284	129	155	175	37	32	35	35.39	42.56	38.97	51.87	47.85	31.71	16.43
25. Same Level	721	238	483	516	38	51	111	65.30	132.62	98.95	152.95	49.14	50.54	52.10
26. Other/Unspecified	1,211	485	725	871	100	94	135	133.07	199.07	166.19	258.17	129.32	93.16	63.36
27. Fall (Total)	*2,631*	*1,086*	*1,544*	*1,793*	*242*	*237*	*329*	*297.96*	*423.94*	*361.07*	*531.46*	*312.94*	*234.87*	*154.41*
Fires and Burns														
28. Housefires	8	6	2	4	2	1	1	1.65	0.55	1.10	1.19	2.59	0.99	0.47
29. Clothing Ignition	4	3	1	2	2	0	0	0.82	0.27	0.55	0.59	2.59	0.00	0.00
30a. Remainder Excl. Scalds	35	25	10	23	4	3	5	6.86	2.75	4.80	6.82	5.17	2.97	2.35
30b. Fires/Burns Excl. Scalds	47	34	13	29	8	4	6	9.60	6.59	8.10	8.60	10.35	3.96	2.82
31a. Scalds	83	58	25	30	16	17	17	9.60	6.59	8.10	8.89	20.69	16.85	7.98
31b. Fires/Burns (Total)	*130*	*92*	*38*	*59*	*24*	*21*	*23*	*25.24*	*10.43*	*17.84*	*17.49*	*31.04*	*20.81*	*10.79*

Other Unintentional														
32. Firearm	22	19	3	5	9	6	2	5.21	0.82	3.02	1.48	11.64	5.95	0.94
33. Excessive Heat	1	1	0	0	0	0	1	0.27	0	0.14	0	0	0	0.47
34. Excessive Cold	4	3	1	2	2	0	0	0.82	0.27	0.55	0.59	2.59	0.00	0
35. Exposure/Neglect	14	13	1	7	4	3	0	3.57	0.27	1.92	2.07	5.17	2.97	0
36. Lightning	1	0	1	0	0	0	1	0.00	0.27	0.14	0	0	0	0.47
37. Natural Disaster	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38. Aspiration-Food	12	7	5	10	0	1	1	1.92	1.37	1.65	2.96	0	0.99	0.47
39. Aspiration-Nonfood	10	5	5	4	1	2	3	1.37	1.37	1.37	1.19	1.29	1.98	1.41
40. Suffocation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41. Struck by Falling Object	20	13	7	8	5	3	3	3.57	1.92	2.74	2.37	6.47	2.97	1.41
42. Collision with Object/Person	120	88	32	63	22	15	17	24.14	8.79	16.47	18.67	28.45	14.87	7.98
43. Caught/Crushed	24	18	6	10	4	4	5	4.94	1.65	3.29	2.96	5.17	3.96	2.35
44. Machinery	29	25	4	16	5	1	6	6.86	1.10	3.98	4.74	6.47	0.99	2.82
45. Cutting/Piercing	224	185	39	101	48	52	21	50.76	10.71	30.74	29.94	62.07	51.53	9.86
46. Explosion	2	2	0	1	0	1	0	0.55	0	0.27	0.30	0	0.99	0
47. Electric Current	5	3	2	3	0	0	1	0.82	0.55	0.69	0.89	0	0	0.47
48a. Remainder Uninten. Excl. Traff.	484	321	163	304	67	60	50	88.07	44.72	66.42	90.11	19.86	17.78	14.82
48b. Unintentional Excl. Traffic	3,851	1,956	1,894	2,450	459	421	471	536.66	520.04	528.49	726.20	593.56	417.22	221.06
49. Unintentional (Total)	***4,184***	***2,187***	***1,996***	***2,617***	***506***	***463***	***536***	***600.04***	***548.05***	***574.19***	***775.70***	***654.34***	***458.84***	***251.56***
SELF-INFLICTED														
50. Firearm	6	3	3	2	1	1	1	0.82	0.82	0.82	0.59	1.29	0.99	0.47
51. Poison Solids/Liquids	149	81	68	87	27	15	12	22.22	18.67	20.45	25.79	34.92	14.87	5.63
52. Motor Vehicle Exhaust	2	2	0	2	0	0	0	0.55	0	0.27	0.59	0	0	0
53. Hanging	5	5	0	0	2	1	1	1.37	0	0.69	0	2.59	0.99	0.47
54. Drowning	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55. Cutting/Piercing	42	31	11	21	9	5	5	8.51	3.02	5.76	6.22	11.64	4.96	2.35
56. Jumping	3	2	1	1	0	1	1	0.55	0.27	0.41	0.30	0	0.99	0.47
57a. Remainder Non-Firearm	8	6	2	5	2	0	1	1.65	0.55	1.10	1.48	0.59	0	0.30
57b. Non-Firearm (Total)	209	127	82	116	40	22	20	34.84	22.52	28.68	34.38	51.73	21.80	9.39
58. Self-Inflicted (Total)	***215***	***130***	***85***	***118***	***41***	***23***	***21***	***35.67***	***23.34***	***29.51***	***34.98***	***53.02***	***22.79***	***9.86***
ASSAULT														
59. Firearm	182	168	14	12	130	27	9	46.09	3.84	24.98	3.56	168.11	26.76	4.22
60. Cutting/Stabbing	362	323	39	82	158	79	20	88.62	10.71	49.68	24.31	204.32	78.29	9.39
61. Strangulation	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62. Other	606	502	104	195	261	106	36	137.73	28.56	83.16	57.80	337.51	105.05	16.90
63. Non-Firearm (Total)	968	825	143	277	419	185	56	226.35	39.26	132.84	82.11	541.83	183.34	26.28
64. Assault (Total)	***1,150***	***993***	***157***	***289***	***549***	***212***	***65***	***272.45***	***43.11***	***157.82***	***85.66***	***709.94***	***210.09***	***30.51***
65a. Legal Intervention-Firearm	2	2	0	0	1	0	1	0.55	0	0.27	0	1.29	0	0.47
65b. Remainder Legal intervention	11	9	2	2	6	2	1	9.60	6.59	8.10	0.59	7.76	1.98	0.47
UNDETERMINED INTENT														
66. Undetermined-Firearm	6	6	0	3	3	0	0	1.65	0	0.82	0.89	3.88	0	0
67. Undet-Poison Solids/Liquids	18	13	5	12	4	0	1	3.57	1.37	2.47	3.56	5.17	0	0.47
68a. Remainder Undetermined	22	18	4	13	5	2	2	9.60	6.59	8.10	3.85	6.47	1.98	0.94
68b. Undetermined (Total)	***46***	***37***	***9***	***28***	***12***	***2***	***3***	***10.15***	***2.47***	***6.31***	***8.30***	***15.52***	***1.98***	***1.41***
INJURIES (TOTAL)	***5,608***	***3,358***	***2,249***	***3,054***	***1,115***	***702***	***627***	***921.33***	***617.52***	***769.62***	***905.23***	***1441.87***	***695.69***	***294.27***

* The total for each cause of injury may not equal the sum of both genders or the sum of all races, because gender information was missing in 1 case and race information was missing in 1

** Asians accounted for 572 (91%) of Hospitalizations classified as Asian/Other.

Table 5. Number of Injury Hospitalizations by Age, San Francisco Residents, July 1990 - June 1991

Cause	0	1-	5-	10-	15-	20-	25-	30-	35-	45-	55-	65-	75-	85+	Total
UNINTENTIONAL															
Transportation															
1. Motor Vehicle-Train	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Motor Vehicle-Occupant	1	1	1	2	9	18	18	14	28	13	6	6	7	2	126
3. Motorcyclist	0	0	0	0	6	30	25	14	10	4	0	0	0	0	89
4. Bicyclist	0	0	1	1	0	4	3	0	2	0	0	0	0	0	11
5. Pedestrian	0	6	6	6	5	4	10	5	14	10	6	13	14	6	105
6a. Remainder Motor Vehicle Traffic	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
6b. Motor Vehicle-Traffic (Total)	*1*	*7*	*8*	*9*	*20*	*57*	*56*	*34*	*54*	*27*	*12*	*19*	*21*	*8*	*333*
7. Pedestrian-Nontraffic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Pedestrian-Train	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
9. Aircraft	0	0	0	1	0	0	1	1	0	1	0	0	1	0	5
Drowning															
10. Boat-Related	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
11. Non-Boat	0	0	1	0	0	1	1	1	1	0	0	1	0	1	7
12. Drowning (Total)	*0*	*0*	*1*	*0*	*0*	*1*	*1*	*1*	*1*	*0*	*1*	*1*	*0*	*1*	*8*
Poisoning															
13. Opiates	0	0	0	0	0	1	1	1	1	2	0	0	0	0	6
14. Barbiturates	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
15. Tranquilizers	0	3	0	0	2	2	1	2	6	0	0	4	0	2	22
16. Antidepressants	0	1	0	0	0	1	0	0	2	2	0	0	0	0	6
17. Alcohol	0	1	0	0	1	0	2	0	0	1	1	1	1	0	8
18a. Remainder Solids/Liquids	1	6	0	1	3	5	4	5	17	5	5	5	1	1	59
18b. Solids/Liquids (Total)	*1*	*11*	*0*	*1*	*6*	*9*	*8*	*8*	*26*	*10*	*7*	*10*	*2*	*3*	*102*
19. Motor Vehicle Exhaust	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20a. Remainder Gas/Vapor	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
20b. Gas/Vapor (Total)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*1*	*2*
Falls															
21. Stairs	4	7	0	6	5	7	7	21	34	22	30	41	62	33	279
22. Ladder/Scaffold	0	1	1	0	0	7	8	5	11	12	5	6	4	4	64
23. Building/Structure	0	2	4	1	1	6	9	18	15	7	2	3	3	1	72
24. Different Level	10	18	11	5	2	6	12	13	17	17	13	41	61	58	284
25. Same Level	0	3	3	10	5	17	23	24	61	52	65	96	200	162	721
26. Other/Unspecified	1	5	10	11	13	22	36	38	76	82	96	176	347	298	1,211
27. Fall (Total)	*15*	*36*	*29*	*33*	*26*	*65*	*95*	*119*	*214*	*192*	*211*	*363*	*677*	*556*	*2,631*
Fires and Burns															
28. Housefires	0	0	0	0	0	1	0	1	2	0	2	0	1	1	8
29. Clothing Ignition	0	1	0	0	0	0	0	1	1	0	0	1	0	0	4
30a. Remainder Excl. Scalds	0	0	0	0	1	0	3	8	9	3	4	4	1	2	35
30b. Fires/Burns Excl. Scalds	0	1	0	0	1	1	3	10	12	3	6	5	2	3	47
31a. Scalds	5	21	1	2	4	6	1	5	16	6	5	4	4	3	83
31b. Fires/Burns (Total)	*5*	*22*	*1*	*2*	*5*	*7*	*4*	*15*	*28*	*9*	*11*	*9*	*6*	*6*	*130*

Other Unintentional															
32. Firearm	0	0	0	0	6	6	1	2	7	0	0	0	0	0	22
33. Excessive Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
34. Excessive Cold	0	0	0	0	0	0	0	0	1	2	0	1	0	0	4
35. Exposure/Neglect	0	0	0	0	0	0	0	1	3	4	2	2	2	0	14
36. Lightning	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
37. Natural Disaster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38. Aspiration-Food	0	0	0	0	0	1	0	1	3	1	2	1	3	0	12
39. Aspiration-Nonfood	0	1	0	0	0	0	0	2	2	0	1	0	3	1	10
40. Suffocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41. Struck by Falling Object	0	1	4	2	0	0	0	5	2	3	1	0	1	1	20
42. Collision with Object/Person	2	2	7	4	15	12	21	9	22	5	7	5	5	4	120
43. Caught/Crushed	0	5	1	0	0	2	5	1	2	3	4	1	0	0	24
44. Machinery	0	0	0	0	3	3	3	4	6	4	2	1	3	0	29
45. Cutting/Piercing	2	9	7	5	13	26	36	35	57	16	8	4	3	3	224
46. Explosion	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
47. Electric Current	0	0	0	0	0	0	0	2	2	1	0	0	0	0	5
48a. Remainder Uninten. Excl. Traffic	1	8	15	17	17	41	61	73	91	38	33	29	40	20	484
48b. Unintentional Excl. Traffic	26	95	65	66	92	173	236	279	469	290	290	427	746	597	3,851
49. Unintentional (Total)	***27***	***102***	***73***	***75***	***112***	***230***	***292***	***313***	***523***	***317***	***302***	***446***	***767***	***605***	***4,184***
SELF-INFLICTED															
50. Firearm	0	0	0	0	2	0	1	1	0	0	0	2	0	0	6
51. Poison Solids/Liquids	1	0	0	1	18	22	23	28	31	12	7	3	1	2	149
52. Motor Vehicle Exhaust	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
53. Hanging	0	0	0	0	0	2	0	0	1	0	0	1	1	0	5
54. Drowning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55. Cutting/Piercing	0	0	0	1	2	4	8	11	12	3	1	0	0	0	42
56. Jumping	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
57a. Remainder Non-Firearm Self-Infl.	0	0	0	0	1	0	3	1	1	2	0	0	0	0	8
57b. Non-Firearm (Total)	1	0	0	2	21	28	34	43	45	18	9	4	2	2	209
58. Self-Inflicted (Total)	***1***	***0***	***0***	***2***	***23***	***28***	***35***	***44***	***45***	***18***	***9***	***6***	***2***	***2***	***215***
ASSAULT															
59. Firearm	0	0	0	3	49	48	38	24	16	1	0	0	0	3	182
60. Cutting/Stabbing	0	0	0	3	32	69	79	62	78	19	12	4	1	3	362
61. Strangulation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62. Other	2	1	1	9	27	76	101	130	163	46	21	19	4	6	606
63. Non-Firearm (Total)	2	1	1	12	59	145	180	192	241	65	33	23	5	9	968
64. Assault (Total)	***2***	***1***	***1***	***15***	***108***	***193***	***218***	***216***	***257***	***66***	***33***	***23***	***5***	***12***	***1,150***
65. Legal Intervention-Firearm	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2
UNDETERMINED INTENT															
66. Undetermined-Firearm	0	0	0	0	1	0	2	0	2	1	0	0	0	0	6
67. Undet-Poison Solids/Liquids	0	0	0	1	1	1	2	3	7	1	1	1	0	0	18
68a. Remainder Undetermined	0	1	0	0	1	1	2	4	3	5	4	1	0	0	22
68b. Undetermined (Total)	***0***	***1***	***0***	***1***	***3***	***2***	***6***	***7***	***12***	***7***	***5***	***2***	***0***	***0***	***46***
INJURIES (TOTAL)	***30***	***104***	***74***	***93***	***248***	***453***	***552***	***584***	***840***	***408***	***350***	***478***	***774***	***620***	***5,608***

Table 6. Rates of Injury Hospitalization per 100,000 Population per Year, by Age, San Francisco Residents, July 1990 - June 1991

Cause	0	1-	5-	10-	15-	20-	25-	30-	35-	45-	55-	65-	75-	85-	Total
UNINTENTIONAL															
Transportation															
1. Motor Vehicle-Train	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Motor Vehicle-Occupant	12.71	3.47	3.18	6.56	26.16	31.88	21.87	17.80	21.11	16.75	9.57	10.41	19.61	16.74	17.29
3. Motorcyclist	0	0	0	0	17.44	53.13	30.38	17.80	7.54	5.15	0	0	0	0	12.21
4. Bicyclist	0	0	3.18	3.28	0	7.08	3.65	0	1.51	0	0	0	0	0	1.51
5. Pedestrian	0	20.82	19.11	19.67	14.53	7.08	12.15	6.36	10.55	12.88	9.57	22.55	39.23	50.22	14.41
6a. Remainder	0	0	0	0	0	1.77	0	1.27	0	0	0	0	0	0	0.27
6b. Motor Vehicle-Traffic (Total)	*12.71*	*24.29*	*25.48*	*29.50*	*58.13*	*100.95*	*68.05*	*43.22*	*40.71*	*34.79*	*19.14*	*32.95*	*58.84*	*66.96*	*45.70*
7. Pedestrian-Nontraffic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8. Pedestrian-Train	0	0	0	0	0	0	0	0	0	1.29	0	0	0	0	0.14
9. Aircraft	0	0	0	3.28	0	0	1.22	1.27	0	1.29	0	0	2.80	0	0.69
Drowning															
10. Boat-Related	0	0	0	0	0	0	0	0	0	0	1.59	0	0	0	0.14
11. Non-Boat	0	0	3.18	0	0	1.77	1.22	1.27	0.75	0	0	1.73	0	8.37	0.96
12. Drowning (Total)	*0*	*0*	*3.18*	*0*	*0*	*1.77*	*1.22*	*1.27*	*0.75*	*0*	*1.59*	*1.73*	*0*	*8.37*	*1.10*
Poisoning															
13. Opiates	0	0	0	0	0	1.77	1.22	1.27	0.75	2.58	0	0	0	0	0.82
14. Barbiturates	0	0	0	0	0	0	0	0	0	0	1.59	0	0	0	0.14
15. Tranquilizers	0	10.41	0	0	5.81	3.54	1.22	2.54	4.52	0	0	6.94	0	16.74	3.02
16. Antidepressants	0	3.47	0	0	0	1.77	0	0	1.51	2.58	0	0	0	0	0.82
17. Alcohol	0	3.47	0	0	2.91	0	2.43	0	0	1.29	1.59	1.73	2.80	0	1.10
18a. Remainder Solids/Liquids	12.72	20.82	0	3.28	8.72	8.86	4.86	6.36	12.82	6.44	7.97	8.67	2.80	8.37	8.10
18b. Solids/Liquids (Total)	*12.71*	*38.18*	*0*	*3.28*	*17.44*	*15.94*	*9.72*	*10.17*	*19.60*	*12.88*	*11.16*	*17.34*	*5.60*	*25.11*	*14.00*
19. Motor Vehicle Exhaust	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20a. Remainder Gas/Vapor	0	0	0	0	0	0	0	0	0.75	0	0	0	0	8.37	0.27
20b. Gas/Vapor (Total)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0.75*	*0*	*0*	*0*	*0*	*8.37*	0.27
Falls															
21. Stairs	50.85	24.29	0	19.67	14.53	12.40	8.51	26.70	25.63	28.35	47.84	71.11	173.73	276.22	38.29
22. Ladder/Scaffold	0	3.47	3.18	0	0	12.40	9.72	6.36	8.29	15.46	7.97	10.41	11.21	33.48	8.78
23. Building/Structure	0	6.94	12.74	3.28	2.91	10.63	10.94	22.88	11.31	9.02	3.19	5.20	8.41	8.37	9.88
24. Different Level	127.11	62.47	35.03	16.39	5.81	10.63	14.58	16.53	12.82	21.90	20.73	71.11	170.93	485.48	38.97
25. Same Level	0	10.41	9.55	32.78	14.53	30.11	27.95	30.51	45.98	67.00	103.66	166.49	560.43	1355.99	98.95
26. Other/Unspecified	12.71	17.35	31.84	36.06	37.79	38.96	43.74	48.31	57.29	105.65	153.10	305.24	972.34	2494.35	166.19
27. Fall (Total)	*190.67*	*124.94*	*92.35*	*108.17*	*75.57*	*115.12*	*115.44*	*151.28*	*161.32*	*247.38*	*336.49*	*629.55*	*1897.05*	*4653.89*	*361.07*
Fires and Burns															
28. Housefires	0	0	0	0	0	1.77	0	1.27	1.51	0	3.19	0	2.80	8.37	1.10
29. Clothing Ignition	0	3.47	0	0	0	0	0	1.27	0.75	0	0	1.73	0	0	0.55
30a. Remainder Excl. Scalds	0	0	0	0	2.91	0	3.65	10.17	6.78	3.87	6.38	6.94	2.80	16.74	4.80
30b. Fires/Burns Excl. Scalds	0	3.47	0	0	2.91	1.77	3.65	12.71	9.05	3.87	9.57	8.67	5.60	25.11	6.45
31a. Scalds	63.61	72.88	3.18	6.56	11.63	10.63	1.22	6.36	12.06	7.73	7.97	6.94	11.21	25.11	11.39
31b. Fires/Burns (Total)	*63.56*	*76.35*	*3.18*	*6.56*	*14.53*	*12.40*	*4.86*	*19.07*	*21.11*	*11.60*	*17.54*	*15.61*	*16.81*	*50.22*	17.84

Other Unintentional															
32. Firearm	0	0	0	0	17.44	10.63	1.22	2.54	5.28	0	0	0	0	0	3.02
33. Excessive Heat	0	0	0	0	0	0	0	0	0	0	0	0	0	8.37	0.14
34. Excessive Cold	0	0	0	0	0	0	0	0	0.75	2.58	0.00	1.73	0	0	0.55
35. Exposure/Neglect	0	0	0	0	0	0	0	1.27	2.26	5.15	3.19	3.47	5.60	0	1.92
36. Lightning	0	0	0	0	2.91	0	0	0	0	0	0	0	0	0	0.14
37. Natural Disaster	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38. Aspiration-Food	0	0	0	0	0	1.77	0	1.27	2.26	1.29	3.19	1.73	8.41	0	1.65
39. Aspiration-Nonfood	0	3.47	0	0	0	0	0	2.54	1.51	0	1.59	0	8.41	8.37	1.37
40. Suffocation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41. Struck by Falling Object	0	3.47	12.74	6.56	0	0	0	6.36	1.51	3.87	1.59	0	2.80	8.37	2.74
42. Collision with Object/Person	25.42	6.94	22.29	13.11	43.60	21.25	25.52	11.44	16.58	6.44	11.16	8.67	14.01	33.48	16.47
43. Caught/Crushed	0	17.35	3.18	0	0	3.54	6.08	1.27	1.51	3.87	6.38	1.73	0	0	3.29
44. Machinery	0	0	0	0	8.72	5.31	3.65	5.09	4.52	5.15	3.19	1.73	8.41	0	3.98
45. Cutting/Piercing	25.42	31.23	22.29	16.39	37.79	46.05	43.74	44.49	42.97	20.62	12.76	6.94	8.41	25.11	30.74
46. Explosion	0	0	0	3.28	0	0	0	0	0.75	0	0	0	0	0	0.27
47. Electric Current	0	0	0	0	0	0	0	2.54	1.51	1.29	0	0	0	0	0.69
48a. Remain. Uninten. Excl. Traff.	12.72	27.76	47.77	55.72	49.41	72.61	74.12	92.80	68.60	48.96	52.63	50.29	112.09	167.41	66.42
48b. Unintentional Excl. Traffic	330.49	329.70	206.99	216.34	267.40	306.39	286.77	354.68	353.56	373.65	462.48	740.55	2090.40	4997.07	528.49
49. Unintentional (Total)	***343.21***	***353.99***	***232.46***	***245.85***	***325.53***	***407.34***	***354.81***	***397.90***	***394.26***	***408.44***	***481.61***	***773.50***	***2149.24***	***5064.03***	***574.19***
SELF-INFLICTED															
50. Firearm	0	0	0	0	5.81	0	1.22	1.27	0	0	0	3.47	0	0	0.82
51. Poison Solids/Liquids	12.71	0	0	3.28	52.32	38.96	27.95	35.60	23.37	15.46	11.16	5.20	2.80	16.74	20.45
52. Motor Vehicle Exhaust	0	0	0	0	0	0	0	0	0	1.29	1.59	0	0	0	0.27
53. Hanging	0	0	0	0	0	3.54	0	0	0.75	0	0	1.73	2.80	0	0.69
54. Drowning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55. Cutting/Piercing	0	0	0	3.28	5.81	7.08	9.72	13.98	9.05	3.87	1.59	0	0	0	5.76
56. Jumping	0	0	0	0	0	0	0	3.81	0	0	0	0	0	0	0.41
57a. Remain, Non-Firearm Self-inf	0	0	0	0	2.91	0	3.65	1.27	0.75	2.58	0	0	0	0	1.10
57b. Non-Firearm (Total)	12.71	0	0	6.56	61.04	49.59	41.31	54.66	33.92	23.19	14.35	6.94	5.60	16.74	28.68
58. Self-inflicted (Total)	***12.71***	***0***	***0***	***6.56***	***66.85***	***49.59***	***42.53***	***55.94***	***33.92***	***23.19***	***14.35***	***10.41***	***5.60***	***16.74***	***29.51***
ASSAULT															
59. Firearm	0	0	0	9.83	142.42	85.01	46.17	30.51	12.06	1.29	0	0	0	25.11	24.98
60. Cutting/Stabbing	0	0	0	9.83	93.01	122.20	95.99	78.82	58.80	24.48	19.14	6.94	2.80	25.11	49.68
61. Strangulation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62. Other	25.42	3.47	3.18	29.50	78.48	134.60	122.73	165.26	122.88	59.27	33.49	32.95	11.21	50.22	83.16
63. Non-Firearm (Total)	25.42	3.47	3.18	39.34	171.49	256.80	218.72	244.08	181.68	83.75	52.63	39.89	14.01	75.33	132.84
64. Assault (Total)	***25.42***	***3.47***	***3.18***	***49.17***	***313.91***	***341.81***	***264.89***	***274.59***	***193.74***	***85.04***	***52.63***	***39.89***	***14.01***	***100.44***	***157.82***
65. Legal Intervention-Firearm	0	0	0	0	2.91	0	0	0	0	0	0	0	0	8.37	0.27
UNDETERMINED INTENT															
66. Undetermined-Firearm	0	0	0	0	2.91	0	2.43	0	1.51	1.29	0	0	0	0	0.82
67. Undet-Poison Solids/Liquids	0	0	0	3.28	2.91	1.77	2.43	3.81	5.28	1.29	1.59	1.73	0	0	2.47
68a. Remainder Undetermined	0	3.47	0	0	2.91	1.77	2.43	5.09	2.26	6.44	6.38	1.73	0	0	3.02
68b. Undetermined (Total)	*0*	*3.47*	*0*	*3.28*	*8.72*	*3.54*	*7.29*	*8.90*	*9.05*	*9.02*	*7.97*	*3.47*	*0*	*0*	6.31
INJURIES (TOTAL)	***381.34***	***360.94***	***235.65***	***304.85***	***720.83***	***802.28***	***670.74***	***742.42***	***633.24***	***525.69***	***558.16***	***829.00***	***2168.86***	***5189.59***	***769.62***

APPENDIX D

Injury Prevention Programs

The following is a list of programs in San Francisco which focus on injury prevention. Since the causes of injury are varied and complex, many health and human service organizations, housing programs, workplace safety programs, and other services, agencies, and projects contribute to the prevention and control of injury. We have attempted here to include those programs which are primarily about injury prevention and we realize that this list is incomplete. If you would like to let us know about a program which you believe should be included in the next printing of this report, please send a brochure or other brief program description including contact person, address and telephone number to: Injury in San Francisco, c/o CHIPPS, 101 Grove St., room 204, San Francisco, CA 94102.

American Red Cross
1550 Sutter St., 94109
Contact: Lisa Blutman
Phone: 202-0609

Center for Elderly Suicide Prevention
4110 Geary Blvd, 94118
Contact: Patrick Arbore
Phone: 752-2437

Child Health and Disability Prevention (CHDP)
SFDPH, 680 8th St., 94103
Contact: Renee Cheney-Cohen
Phone: 554-9958

Community and Home Injury Prevention Program for Seniors
(CHIPPS)
SFDPH, 101 Grove St., room 204, 94102
Contact: Michael Radetsky
Phone: 554-2924

Community United Against Violence (CUAV)
973 Market St., 94103
Contact: Executive Director
Phone: 777-5500

Consortium for Elder Abuse Prevention
S.F.I.A., 3330 Geary Blvd, 94118
Contact: Lisa Nerenberg
Phone:750-4188

Consumer Product Safety Commission/
Western Regional Center
600 Harrison St., room 245, 94107
Contact: Joel Swisher
Phone: 744-2966

Emergency Medical Services Agency
SFDPH, 1540 Market St., Suite 220, 94102
Contact: Abbie Yant
Phone: 554-9970

Family Violence Prevention Fund
SFGH, Building 1, 94110
Contact: Esta Soler
Phone: 821-4553

La Casa de las Madras
965 Mission St., #218, 94103
Contact: Sharon Ruth
Phone: 777-1808

Men Overcoming Violence (MOVE)
54 Mint St., #300, 94103
Contact: Jim Shattuck
Phone: 777-4496

National Highway Traffic Safety Administration, Regional Office
211 Main St., Suite 100, 94105
Contact: Al Crancer
Phone: 744-3089

Northern California Traffic Safety Foundation
3450 Geary Blvd., 94118
Contact: Ronald McNees
Phone: 386-6404

Office of Driver Safety
DMV, 1377 Fell St., 2nd fl, 94117
Contact: Barbara Klag
Phone: 557-1170

Pacific Center for Violence Prevention
SFGH, Building 1, 94110
Contact: Andrew McGuire
Phone: 285-1793

Physicians for a Violence-Free Society
SFGH, Building 1, room 306. 94110
Contact: Ellen Taliaferro
Phone: 821-5686

Prevention and Leadership Alternatives for Youth (PLAY)
B/HP Foundation, 150 Executive Park Blvd.
Suite 1300, 94134
Contact: Joyce Layne-Jordan
Phone: 715-0133

Real Alternatives Program, Inc.
1300 Potrero Ave., #A-3, 94188
Contact: Mitchell Salazar
Phone: 282-9984

Safety Awareness for Everyone (SAFE)
850 Bryant St., 94103
Contact: Pam Matsuda
Phone: 553-1984 / 673-SAFE

San Francisco Bay Area Regional Poison Control Center
SFGH, 1001 Potrero Ave., 94110
Hotline: 1-800-523-2222
Contact: Elise Stone
Phone: 206-8554

San Francisco Child Abuse Council
1757 Waller St., 94117
Contact: Kathleen Baxter
Phone: 668-0494

San Francisco Injury Center for Research and Prevention
SFGH, Building 1, room 400, 94110
Contact: Elizabeth McLoughlin
Phone: 821-8209

San Francisco SAFEKIDS Coalition
c/o CHDP
Contact: Renee Cheney-Cohen
Phone: 554-9958

San Francisco Suicide Prevention, Inc.
3940 Geary Blvd., 94118
Contact: Eve Meyer
Phone: 752-4866

The Trauma Foundation
SFGH, Building 1, room 410, 94110
Contact: Andrew McGuire
Phone: 821-8209

Traffic Safety Education
SFPD, Hall of Justice, 850 Bryant St.
room 154, 94103
Contact: Teri Barrett
Phone: 553-1619